

ADALTRA

— we make the connection —

CMHEADEND FLEXIBLE AND INTELLIGENT MODULATION



COMPACT RANGE

CM HEADEND

CM COMPACT

CM COMPACT 2S2

REFERENCE	CM COMPACT 2S2
Code	085006
INPUTS	
Number of tuners	2
Input connectors	2+2 (loop)
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Channel bandwidth	36 MHz
Symbol rate	1 - 45 MSps
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
LNB power supply	13/18 - 0/22 (350mA máx*) V / KHz
DiSEqC	A / B / C / D
OUTPUT	
Number of outputs	1+1 (RFMIX)
MIX Port	<1,5 dB
Output frequencies	170 - 862 MHz
Maximum output level	95 dBμV
Output regulation	20 dB
DVB-T MODULATION	
Number of channels	2 flexibles
Output frequency	170 - 862 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/4, 1/8, 1/16, 1/32
MER	>35 dB
DVB-C MODULATION	
Number of channels	2 flexibles
Output frequency	50 - 862 MHz
Constellation	16, 32, 64, 128, 256QAM
Symbol rate	4 ... 6,96 Mbps
MER	>40 dB
GENERAL	
Local Programming	Cable USB (included)
Power supply	5 (power supply included) Vdc
Consumption (Without LNB)	1000 mA
Operating temperature	0 - 40 °C
Dimensions (including connectors)	160 x 55 x 200 mm

- / TWIN module with 2 satellite inputs and 2 tuners (DVB-S / S2).
- / Independent control of each tuner 13V/18V - 22 KHz - DiSEqC (A/B/C/D)
- / Flexible service remultiplexing on each output MUX
- / NIT tables editing, SID remapping, sending or deleting EMM messages and CAT tables
- / Output of up to 4 channels (CM COMPACT 8S4) or 8 channels in 2 groups of 4+4 (CM COMPACT 8S8)
- / COFDM / QAM programmable output
- / High output level
- / Excellent quality output signal. High MER
- / LCN / LCN HD Insertion
- / Programming through "CM Management" PC software
- / Power supply and USB-USB cable included



CH3 COMPACT

- / 3-unit wall chassis COMPACT series



CM COMPACT

CM COMPACT 8S4

Reference	CM COMPACT 8S4
Code	085001
INPUT	
Number of tuners	8
Input connectors	4
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Channel bandwidth	36 MHz
Symbol rate	1 - 45 MSps
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
Remote feeding	13/18 - 0/22 (350mA max*) V / KHz
Diseqc	A / B / C / D
Unicable	SatCR / dCSS
OUTPUT	
Number of outputs	1
MIX Port	<1,5 dB
Output frequencies	5-900 MHz
Maximum output level	95 dBμV
Output regulation	20 dB
DVB-T Modulation	
Number of channels	4 adjacents
Output frequency	50-860 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/4, 1/8, 1/16, 1/32
MER	>35 dB
DVB-C Modulation	
Number of channels	4 adjacents
Output frequency	50-860 MHz
Constellation	16, 32, 64, 128, 256QAM
Symbol rate	4 ... 6,96 Mbps
MER	>40 dB
GENERAL	
Local Programming	Cable USB (included)
Feeding	5 (power supply included) Vdc
Consumption (Without LNB)	1800 mA
Operating temperature	0 - 40 °C
Measurements (includes connectors))	160 x 55 x 200 mm

- / OCTO module with 4 satellite inputs and 8 tuners (DVB-S / S2 / S2X). Supports multistream
- / BISS compatible
- / Independent control of each tuner 13V/18V - 22 KHz - DiSEqC (A/B/C/D)
- / Flexible service remultiplexing on each output MUX
- / NIT tables editing, SID remapping, sending or deleting EMM messages and CAT tables
- / Output of up to 4 channels (CM COMPACT 8S4) or 8 channels in 2 groups of 4+4 (CM COMPACT 8S8)
- / COFDM / QAM programmable output
- / High output level
- / Excellent quality output signal. High MER
- / LCN / LCN HD Insertion
- / Programming through "CM Management" PC software
- / Power supply and USB-USB cable included



CM COMPACT

CM COMPACT 8S8

REFERENCE	CM COMPACT 8S8
Code	085002
INPUT	
Number of tuners	8
Input connectors	4
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Channel bandwidth	36 MHz
Symbol rate	1 - 45 MSps
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
Remote feeding	13/18 - 0/22 (700mA max*) V / KHz
Diseqc	A / B / C / D
Unicable	SatCR / dCSS
OUTPUT	
Number of outputs	1
MIX Port	<1,5 dB
Output frequencies	5-900 MHz
Maximum output level	95 dBμV
Output regulation	20 dB
DVB-T MODULATION	
Number of channels	8 (4+4 adjacents)
Output frequency	50-860 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/4, 1/8, 1/16, 1/32
MER	>35 dB
DVB-C MODULATION	
Number of channels	8 in two adjacent 4 + 4 groups
Output frequency	50-860 MHz
Constellation	16, 32, 64, 128, 256QAM
Symbol rate	4 ... 6,96 Mbps
MER	>40 dB
GENERAL	
Local Programming	Cable USB (included)
Feeding	5 (power supply included) Vdc
Consumption (Without LNB)	2300 mA
Operating temperature	0 - 40 °C
Measurements (includes connectors))	160 x 55 x 200 mm

- / OCTO modules with 4 satellite inputs and 8 tuners (DVB-S / S2 / S2X). Supports multistream
- / BISS compatible
- / Independent control of each tuner 13V/18V - 22 KHz - DiSEqC (A/B/C/D)
- / Unicable LNB Support: SatCR/dCSS
- / Flexible service remultiplexing on each output MUX
- / Editing NIT tables, SID remapping and passing or deleting EMM messages and CAT tables
- / Output of up to 8 channels in 2 groups of 4+4COFDM / QAM programmable output
- / High output level
- / Excellent quality output signal. High MER
- / LCN / LCN HD Insertion
- / Programming through SW PC ("CM Management")
- / Power supply and USB-USB cable included



CM COMPACT

CM COMPACT PLUS 2S2

REFERENCE	CM COMPACT PLUS 2S2
Code	085011
INPUT	
Number of tuners	2
Input connectors	2+2 (loop)
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Channel bandwidth	36 MHz
Symbol rate	1 - 45 MSps
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
Remote feeding	13/18 - 0/22 (350mA máx*) V / KHz
DiSEqC	A / B / C / D
Unicable	-
OUTPUT	
Number of outputs	1+1 (RFMIX)
MIX Port	<1,5 dB
Output frequencies	170 - 862 MHz
Maximum output level	115 dBμV
Output regulation	20 dB
DVB-T MODULATION	
Number of channels	2 flexible
Output frequency	170 - 862 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/4, 1/8, 1/16, 1/32
MER	>35 dB
DVB-C MODULATION	
Number of channels	2 flexible
Output frequency	50 - 862 MHz
Constellation	16, 32, 64, 128, 256QAM
Symbol rate	4 ... 6,96 Mbps
MER	>40 dB
GENERAL	
Local Programming	USB cable (included)
Power supply	5 (Power supply included) Vdc / A
Consumption (Without LNB)	1000 mA
Operating temperature	0 - 40 °C

- / Twin module with 2 satellite tuners and 2 loop-through outputs
- / Independent control of each input 13V/18V - 22 KHz - DiSEqC (A/B/C/D)
- / Flexible service remultiplexing on each output MUX
- / Editing NIT tables, SID remapping and passing or deleting EMM messages and CAT tables
- / Output of up to 2 flexible channels
- / COFDM / QAM programmable output
- / Modular power supply with integrated output amplifier with a level up to 112dBμV
- / Excellent quality output signal with high MER
- / LCN / LCN HD Insertion
- / Programming through SW PC ("CM Management")



HIGH
OUTPUT
LEVEL

EXCELENT
MER QUALITY
LEVEL

MODULAR
SYSTEM

COMPLETELY
ASSEMBLED

CM COMPACT

CM COMPACT PLUS 8S4

REFERENCE	CM COMPACT PLUS 8S4
Code	085007
INPUT	
Number of tuners	8
Input connectors	4
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Channel bandwidth	36 MHz
Symbol rate	1 - 45 MSps
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
Remote feeding	13/18 - 0/22 (350mA máx.) V / KHz
DiSEqC	A / B / C / D
OUTPUT	
Number of outputs	1
MIX Port	<1,5 dB
Output frequencies	170 - 862 MHz
Maximum output level	112 dBμV
Output regulation	20 dB
DVB-T MODULATION	
Number of channels	4 adjacents
Output frequency	170 - 862 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/4, 1/8, 1/16, 1/32
MER	>35 dB
DVB-C MODULATION	
Number of channels	4 adjacents
Output frequency	50 - 862 MHz
Constellation	16, 32, 64, 128, 256QAM
Symbol rate	4 ... 6,96 Mbps
MER	>40 dB
GENERAL	
Local Programming	USB cable (included)
Power supply	5 - 10 Vdc / A
Consumption (Without LNB)	1800 mA
Operating temperature	0 - 40 °C

- / OCTO modules with 4 satellite inputs and 8 tuners (DVB-S / S2 / S2X). Supports multistream
- / Independent control of each input 13V/18V - 22 KHz - DiSEqC (A/B/C/D)
- / Flexible service remultiplexing on each output MUX
- / Editing NIT tables, SID remapping and passing or deleting EMM messages and CAT tables
- / Output of up to 4 channels (CM COMPACT 8S4) or 8 channels in 2 groups of 4+4 (CM COMPACT 8S8)
- / COFDM / QAM programmable output
- / Modular power supply with integrated output amplifier with a level up to 112dBμV
- / Excellent quality output signal with high MER
- / LCN / LCN HD Insertion
- / Programming through SW PC ("CM Management")



HIGH
OUTPUT
LEVEL

EXCELENT
MER QUALITY
LEVEL

MODULAR
SYSTEM

COMPLETELY
ASSEMBLED

CM COMPACT

CM COMPACT PLUS 8S8

REFERENCE	CM COMPACT PLUS 8S8
Code	085008
INPUT	
Number of tuners	8
Input connectors	4
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Channel bandwidth	36 MHz
Symbol rate	1 - 45 MSps
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
Remote feeding	13/18 - 0/22 (700mA máx.) V / KHz
DiSEqC	A / B / C / D
OUTPUT	
Number of outputs	1
MIX Port	<1,5 dB
Output frequencies	170 - 862 MHz
Maximum output level	108 dBμV
Output regulation	20 dB
DVB-T MODULATION	
Number of channels	8 in two adjacent 4 + 4 groups
Output frequency	170 - 862 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/4, 1/8, 1/16, 1/32
MER	>35 dB
DVB-C MODULATION	
Number of channels	8 in two adjacent 4 + 4 groups
Output frequency	50 - 862 MHz
Constellation	16, 32, 64, 128, 256QAM
Symbol rate	4 ... 6,96 Mbps
MER	>40 dB
GENERAL	
Local Programming	USB cable (included)
Power supply	5 - 10 Vdc / A
Consumption (Without LNB)	2300 mA
Operating temperature	0 - 40 °C

- / OCTO modules with 4 satellite inputs and 8 tuners (DVB-S / S2 / S2X). Supports multistream
- / Independent control of each input 13V/18V - 22 KHz - DiSEqC (A/B/C/D)
- / Flexible service remultiplexing on each output MUX
- / Editing NIT tables, SID remapping and passing or deleting EMM messages and CAT tables
- / Output of up to 4 channels (CM COMPACT 8S4) or 8 channels in 2 groups of 4+4 (CM COMPACT 8S8)
- / COFDM / QAM programmable output
- / Modular power supply with integrated output amplifier with a level up to 112dBμV
- / Excellent quality output signal with high MER
- / LCN / LCN HD Insertion
- / Programming through SW PC ("CM Management")



HIGH
OUTPUT
LEVEL

EXCELENT
MER QUALITY
LEVEL

MODULAR
SYSTEM

COMPLETELY
ASSEMBLED

CM COMPACT

KIT CM COMPACT AV8

- / Headend kit to convert 8 DVB-T/DVB-T2 services - H264/H.265 in to COFDM SD MPEG 2
- / 2 COFDM multiplex at the output
- / Professional modulation quality
- / Simple and intuitive programming
- / Allows you to respect the existing channels in installation without reprogramming TVs.

REFERENCE	KIT CM COMPACT AV 8
Code	085005
INPUT	
Number of RF inputs	1
Number of tuners	8
Input frequency	47-862 MHz
Impedance	75 Ohm
Input level	-82 a -20dBm
OUTPUT	
Number of RF outputs	1
Output frequency	170 - 862 MHz
Maximum output level	95 dBuV
Modulation	COFDM selectable
Number of MUX	2 COFDM
MER	>35dB (COFDM)
GENERAL	
Programming	On-site with CM Management software
Power	AC100-240V. 50/60Hz
Modular power supply	FA524 IN: AC100-240V. 50/60Hz - OUT: 5Vdc
Working temperature	0 - 40°C

CONVERTS
8 DTT HD
SERVICES
TO SD





MULTIFUNCTIONAL

CM HEADEND

SATELLITE INPUT RF OUTPUT

CM 8SH-TC

REFERENCE	CM 8SH-TC
Code	082255
INPUT	
Number of inputs	4x RF + 1x HDMI + 1x USB
RF INPUT	
Number of tuners	8
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Symbol rate	1 - 45 Mbps
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
LNB power supply	13/18 - 0/22 V / KHz
DiSEqC	A / B / C / D
USB	
Priority	1
Version	2.0
File System	FAT32 / NTFS
Reproduction	Autoplay, List, Time schedule
File format	.TS (Transport Stream)
HDMI	
Priority	2
Video / Bitrate	H.264 / 5 - 15 - / Mbps
Audio / Bitrate	AAC-LC, MPEG1-L2 / 128 - 384 - / Kbps
Max resolution	1080p
OUTPUT	
Number of outputs	1
Mixing port	<1,5 dB
Output frequencies	170 - 862 MHz
Maximum output level	95 dBμV
Output regulation	20 dB
DVB-T modulation	
Number of channels	4 flexible
Output frequency	170 - 230 / 470 - 862 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
Bandwidth	7 or 8 MHz
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/4, 1/8, 1/16, 1/32
MER	>32 dB
DVB-C modulation	
Number of channels	4 flexible
Output frequency	170 - 230 / 470 - 862 MHz
Constellation	16, 32, 64, 128, 256QAM
Bandwidth	7 y 8 MHz
Symbol rate	4 ... 6,96 MSps
MER	>32 dB
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	By RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption (No LNB, no USB, no CAM, no HDMI)	4100 mA
Operating temperature	0 - 40 °C

- / OCTO module with 4 SAT inputs and 8 tuners
- / 1 HDMI input
- / 1 USB 2.0 input
- / Independent control of each input 13 / 18V - 22KHz - DiSEqC (A / B / C / D)
- / Flexible remultiplexing of services on any output channel
- / NIT tables editing, SID remapping, sending or deleting EMM messages and CAT tables
- / Flexible QAM / COFDM output
- / Output of up to 4 channels COFDM / 4 flexible QAM channels
- / High output level
- / Excellent output signal quality with a high MER
- / LCN / LCN HD insert
- / Programming through "CM Management" PC software
- / Configuration cloning. Status and configuration report
- / On-site management (FA 510 / CM PR) or remote (FA 524)



USB AND
HDMI INPUT

* 64 streams for a maximum of 64 services. Up to 300Mbps maximum

SATELLITE INPUT RF+IP OUTPUT

CM 8SH TC/IP

REFERENCE	CM 8SH TC-IP
Code	082257
INPUT	
Number of inputs	4x RF + 1x HDMI + 1x USB
RF INPUT	
Number of tuners	8
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Symbol rate	1 - 45 Mbps
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
Telepower	13/18 - 0/22 V / KHz
DiSEqC	A / B / C / D
USB	
Priority	1
Version	2.0
File System	FAT32 / NTFS
Reproduction	Autoplay, List, Time schedule
File format	.TS (Transport Stream)
HDMI	
Priority	2
Video / Bitrate	H.264 / 5 - 15 - / Mbps
Audio / Bitrate	AAC-LC, MPEG1-L2 / 128 - 384 - / Kbps
Max resolution	1080p
TC OUTPUT	
Number of outputs	1
Mixing port	<1,5 dB
Output frequencies	170 - 862 MHz
Maximum output level	95 dBμV
Output regulation	20 dB
DVB-T MODULATION	
Number of channels	4 flexible
Output frequency	170 - 230 / 470 - 862 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
Bandwidth	7 y 8 MHz
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/4, 1/8, 1/16, 1/32
MER	>32 dB
DVB-C MODULATION	
Number of channels	4 flexible
Output frequency	170 - 230 / 470 - 862 MHz
Constellation	16, 32, 64, 128, 256QAM
Bandwidth	7 or 8 MHz
Symbol rate	4 ... 6,96 MSps
MER	>32 dB
IP OUTPUT	
Connector	RJ45 - Fast Ethernet
Routing scheme	Unicast / Multicast
Maximum services	64 (SPTS / MPTS)
Protocols	UDP / RTP / QoS / SAP
Features	IGMP Query and IGMP Auto-Joint
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	By RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption (No LNB, no USB, no CAM, no HDMI)	4600 mA
Operating temperature	0 - 40 °C

- / OCTO module with 4 SAT inputs and 8 tuners
- / 1 HDMI input
- / 1 USB 2.0 input
- / Independent control of each input 13 / 18V - 22KHz - DiSEqC (A / B / C / D)
- / Programming through "CM Management" PC software
- / Configuration cloning and reporting
- / On-site management (FA 510 / CM PR) or remote (FA 524)

TC output

- / Flexible remultiplexing of services on any output channel
- / Editing NIT tables, SID remapping and passing or deleting EMM messages and CAT tables
- / Flexible QAM / COFDM output
- / Output of up to 4 channels COFDM / 4 flexible QAM channels
- / High output level
- / Excellent output signal quality with a high MER
- / LCN / LCN HD insert

IP output

- / IP output 100Mbps SPTS / MPTS in UDP / RTP format
- / Up to 64 output streams
- / SAP function
- / IGMP Query and IGMP Auto-Joint



NOW WITH
64 STREAMS

USB AND
HDMI INPUT

* 64 streams for a maximum of 64 services. Up to 300Mbps maximum

SATELLITE INPUT RF OUTPUT

CM 2S 2CI-2TC

REFERENCE	CM 2S 2CI-2TC
Code	082327
INPUT	
Number of tuners	2
Input connectors	2+2 (loop)
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Symbol rate	1 - 45 Mbps
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
Telepower	13/18 - 0/22 V / KHz
Telepower (LNB)	350mA máx*
Maximum current per LNB input	500 mA
LNB's maximum total current	750 mA
Common interface	2 x CI
DiSEqC	A / B / C / D
OUTPUT	
Number of outputs	1+1 (RFMIX)
Mixing port	<1,5 dB
Output frequencies	170 - 862 MHz
Maximum output level	95 dBμV
Output regulation	20 dB
DVB-T MODULATION	
Number of channels	2 flexibles
Output frequency	170 - 230 / 470 - 862 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
Bandwidth	7 or 8 MHz
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/4, 1/8, 1/16, 1/32
MER	>35 dB
DVB-C MODULATION	
Number of channels	2 flexibles
Output frequency	170 - 230 / 470 - 862 MHz
Constellation	16, 32, 64, 128, 256QAM
Bandwidth	7 or 8 MHz
Symbol rate	4 ... 6,96 MSps
MER	>35 dB
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	By RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption (No LNB, no CAM)	1200 mA
Operating temperature	0 - 40 °C

- / TWIN module with 2 SAT inputs and 2 tuners (DVB-S/S2).
- / Independent control of each input 13 / 18V - 22KHz - DiSEqC (A / B / C / D)
- / Flexible remultiplexing of services on any output channel
- / Editing NIT tables, SID remapping and passing or deleting EMM messages and CAT tables
- / Programmable QAM / COFDM output
- / Output of up to 2 channels COFDM / 2 QAM channels
- / High output level
- / Excellent output signal quality with a high MER
- / LCN / LCN HD insert
- / Programming via SW PC ("CM Management")
- / Configuration cloning and reporting
- / On-site management (FA 510 / CM PR) or remote (FA 524)
- / 2 common interface slots



2 COMMON
INTERFACE

SATELLITE INPUT RF OUTPUT

CM 8S 2CI-4TC

REFERENCE	CM 8S 2CI-4TC
Code	082323
INPUT	
Number of inputs	4x RF
Number of tuners	8
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Symbol rate	1 - 45
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
Telepower	13/18 - 0/22 V / KHz
Maximum current per LNB input	500 mA
LNB's maximum total current	750 mA
Common interface	2 x CI
DiSEqC	A / B / C / D
Unicable	SatCR / dCSS
OUTPUT	
Number of outputs	1+1 (RFMIX)
Mixing port	<1,5 dB
Output frequencies	170 - 862 MHz
Maximum output level	95 dBμV
Output regulation	20 dB
DVB-T MODULATION	
Number of channels	4 adjacent channels
Output frequency	170 - 230 / 470 - 862 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
Bandwidth	7 or 8 MHz
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/4, 1/8, 1/16, 1/32
MER	>35 dB
DVB-C MODULATION	
Number of channels	4 adjacent channels
Output frequency	170 - 230 / 470 - 862 MHz
Constellation	16, 32, 64, 128, 256QAM
Bandwidth	7 or 8 MHz
Symbol rate	4 ... 6,96 MSps
MER	>35 dB
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	By RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption (No LNB, no CAM)	2000 mA
Operating temperature	0 - 40 °C

- / OCTO module with 4 SAT inputs and 8 tuners (DVB-S/S2/S2X). Supports multistream
- / BISS compatible
- / Independent control of each input 13 / 18V - 22KHz - DiSEqC (A / B / C / D)
- / Unicable LNB Support: SatCR/dCSS
- / Flexible remultiplexing of services on any output channel
- / Editing NIT tables, SID remapping and passing or deleting EMM messages and CAT tables
- / Programmable QAM / COFDM output
- / Output of up to 4 channels COFDM / 4 QAM channels
- / High output level
- / Excellent output signal quality with a high MER
- / LCN / LCN HD insert
- / Programming via SW PC ("CM Management")
- / Configuration cloning and reporting
- / On-site management (FA 510 / CM PR) or remote (FA 524)
- / 2 common interface slots



2 COMMON
INTERFACE

SATELLITE INPUT RF OUTPUT

CM 8S 2CI-8TC

REFERENCE	CM 8S 2CI-8TC
Code	082324
INPUT	
Number of inputs	4x RF
Number of tuners	8
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Symbol rate	1 - 45 Mbps
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
Telepower	13/18 - 0/22 V / KHz
Maximum current per LNB input	500 mA
LNB's maximum total current	750 mA
Common interface	2 x CI
DiSEqC	A / B / C / D
Unicable	SatCR / dCSS
OUTPUT	
Number of outputs	1+1 (RFMIX)
Mixing port	<1,5 dB
Output frequencies	170 - 862 MHz
Maximum output level	95 dBμV
Output regulation	20 dB
DVB-T MODULATION	
Number of channels	8 (4+4) adjacent channels
Output frequency	170 - 230 / 470 - 862 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
Bandwidth	7 or 8 MHz
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/4, 1/8, 1/16, 1/32
MER	>35 dB
DVB-C MODULATION	
Number of channels	8 (4+4) adjacent channels
Output frequency	170 - 230 / 470 - 862 MHz
Constellation	16, 32, 64, 128, 256QAM
Bandwidth	7 or 8 MHz
Symbol rate	4 ... 6,96 MSps
MER	>35 dB
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	By RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption (No LNB, no CAM)	2500 mA
Operating temperature	0 - 40 °C

- / OCTO module with 4 SAT inputs and 8 tuners (DVB-S/S2/S2X). Supports multistream
- / BISS compatible
- / Independent control of each input 13 / 18V - 22KHz - DiSEqC (A / B / C / D)
- / Unicable LNB Support: SatCR/dCSS
- / Flexible remultiplexing of services on any output channel
- / Editing NIT tables, SID remapping and passing or deleting EMM messages and CAT tables
- / Programmable QAM / COFDM output
- / Output of up to 8 channels COFDM / 8 QAM channels
- / High output level
- / Excellent output signal quality with a high MER
- / LCN / LCN HD insert
- / Programming via SW PC ("CM Management")
- / Configuration cloning and reporting
- / On-site management (FA 510 / CM PR) or remote (FA 524)
- / 2 common interface slots



2 COMMON
INTERFACE

SATELLITE INPUT RF OUTPUT

CM 8S 4CI-4TC

REFERENCE	CM 8S 4CI-4TC
Code	082325
INPUT	
Number of inputs	4x RF
Number of tuners	8
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Symbol rate	1 - 45 Mbps
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
Telepower	13/18 - 0/22 V / KHz
Maximum current per LNB input	500 mA
LNB's maximum total current	750 mA
Common interface	4 x CI
DiSEqC	A / B / C / D
Unicable	SatCR / dCSS
OUTPUT	
Number of outputs	1+1 (RFMIX)
Mixing port	<1,5 dB
Output frequencies	170 - 862 MHz
Maximum output level	95 dBμV
Output regulation	20 dB
DVB-T MODULATION	
Number of channels	4 adjacent channels
Output frequency	170 - 230 / 470 - 862 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
Bandwidth	7 or 8 MHz
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/4, 1/8, 1/16, 1/32
MER	>35 dB
DVB-C MODULATION	
Number of channels	4 adjacent channels
Output frequency	170 - 230 / 470 - 862 MHz
Constellation	16, 32, 64, 128, 256QAM
Bandwidth	7 or 8 MHz
Symbol rate	4 ... 6,96 MSps
MER	>35 dB
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	By RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption (No LNB, no CAM)	2200 mA
Operating temperature	0 - 40 °C

- / OCTO module with 4 SAT inputs and 8 tuners (DVB-S/S2/S2X). Supports multistream
- / BISS compatible
- / Independent control of each input 13 / 18V - 22KHz - DiSEqC (A / B / C / D)
- / Unicable LNB Support: SatCR/dCSS
- / Flexible remultiplexing of services on any output channel
- / Editing NIT tables, SID remapping and passing or deleting EMM messages and CAT tables
- / Programmable QAM / COFDM output
- / Output of up to 4 channels COFDM / 4 QAM channels
- / High output level
- / Excellent output signal quality with a high MER
- / LCN / LCN HD insert
- / Programming via SW PC ("CM Management")
- / Configuration cloning and reporting
- / On-site management (FA 510 / CM PR) or remote (FA 524)
- / 4 common interface slots



2 COMMON
INTERFACE

SATELLITE INPUT RF OUTPUT

CM 8S 4CI-8TC

REFERENCE	CM 8S 4CI-8TC
Code	082326
INPUT	
Number of inputs	4x RF
Number of tuners	8
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Symbol rate	1 - 45 Mbps
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
Telepower	13/18 - 0/22 V / KHz
Maximum current per LNB input	500 mA
LNB's maximum total current	750 mA
Common interface	4 x CI
DiSEqC	A / B / C / D
Unicable	SatCR / dCSS
OUTPUT	
Number of outputs	1+1 (RFMIX)
Mixing port	<1,5 dB
Output frequencies	170 - 862 MHz
Maximum output level	95 dBμV
Output regulation	20 dB
DVB-T MODULATION	
Number of channels	8 (4+4) adjacent channels
Output frequency	170 - 230 / 470 - 862 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
Bandwidth	7 or 8 MHz
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/4, 1/8, 1/16, 1/32
MER	>35 dB
DVB-C MODULATION	
Number of channels	8 (4+4) adjacent channels
Output frequency	170 - 230 / 470 - 862 MHz
Constellation	16, 32, 64, 128, 256QAM
Bandwidth	7 or 8 MHz
Symbol rate	4 ... 6,96 MSps
MER	>35 dB
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	By RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption (No LNB, no CAM)	2700 mA
Operating temperature	0 - 40 °C

- / OCTO module with 4 SAT inputs and 8 tuners (DVB-S/S2/S2X). Supports multistream
- / BISS compatible
- / Independent control of each input 13 / 18V - 22KHz - DiSEqC (A / B / C / D)
- / Unicable LNB Support: SatCR/dCSS
- / Flexible remultiplexing of services on any output channel
- / Editing NIT tables, SID remapping and passing or deleting EMM messages and CAT tables
- / Programmable QAM / COFDM output
- / Output of up to 8 channels COFDM / 8 QAM channels
- / High output level
- / Excellent output signal quality with a high MER
- / LCN / LCN HD insert
- / Programming via SW PC ("CM Management")
- / Configuration cloning and reporting
- / On-site management (FA 510 / CM PR) or remote (FA 524)
- / 4 common interface slots



2 COMMON
INTERFACE

TERRESTRIAL/CABLE INPUT · RF OUTPUT

CM 4T-TC

REFERENCE	CM 4T-TC
Code	082258
INPUT	
Number of inputs	1x RF
Number of tuners	4
DVB-T / T2 RECEPTION	
Input frequency	110 - 862 MHz
Input level	33-88 dBμV
Constellation - Mode	QPSK, 16, 64, 256QAM 1K, 2K, 4K, 8K, 16K, 32K
DVB-C RECEPTION	
Input frequency	110 - 862 MHz
Input level	46 - 88 dBμV
Constellation - Mode	QPSK, 16, 32, 64, 128, 256 QAM / 6, 7, 8 - / MHz
Symbol rate	0,2 - 7.7 MSps
OUTPUT	
Number of outputs	1
Mixing port	<1,5 dB
Output frequencies	170 - 862 MHz
Maximum output level	95 dBμV
Output regulation	20 dB
DVB-T MODULATION	
Number of channels	4 flexible
Output frequency	170 - 230 / 470 - 862 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
Bandwidth	7 or 8 MHz
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/4, 1/8, 1/16, 1/32
MER	>32 dB
DVB-C MODULATION	
Number of channels	4 flexible
Output frequency	170 - 230 / 470 - 862 MHz
Constellation	16, 32, 64, 128, 256QAM
Bandwidth	7 or 8 MHz
Symbol rate	4 ... 6,96 MSps
MER	>32 dB
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	By RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption	2300 mA
Operating temperature	0 - 40 °C

- / QUAD terrestrial and cable module (DVB-T / T2 / C)
- / 1 input / 4 independent tuners
- / Input LOOP
- / Flexible remultiplexing of services on any output channel
- / NIT tables editing, SID remapping, sending or deleting EMM messages and CAT tables
- / Programmable QAM / COFDM output
- / Output of up to 4 channels COFDM / 4 flexible QAM channels
- / High output level
- / Excellent output signal quality with high MER
- / LCN / LCN HD insert
- / Programming through "CM Management" PC software
- / Configuration cloning. Status and configuration report
- / On-site management (FA 510 / CM PR) or remote (FA 524)



TERRESTRIAL/CABLE INPUT · RF OUTPUT

CM 4T CI-TC

REFERENCE	CM 4T CI-TC
Code	082259
INPUT	
Number of inputs	1x RF
Number of tuners	4
DVB-T / T2 reception	
Input frequency	110 - 862 MHz
Input level	33-88 dBμV
Constellation - Mode	QPSK, 16, 64, 256QAM 1K, 2K, 4K, 8K, 16K, 32K
DVB-C RECEPTION	
Input frequency	110 - 862 MHz
Input level	46 - 88 dBμV
Constellation - Mode	QPSK, 16, 32, 64, 128, 256 QAM / 6, 7, 8 - / MHz
Symbol rate	0,2 - 7.7 MSps
Common interface	2 x CI
OUTPUT	
Number of outputs	1
Mixing port	<1,5 dB
Output frequencies	170 - 862 MHz
Maximum output level	95 dBμV
Output regulation	20 dB
DVB-T MODULATION	
Number of channels	4 flexible
Output frequency	170 - 230 / 470 - 862 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
Bandwidth	7 or 8 MHz
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/4, 1/8, 1/16, 1/32
MER	>32 dB
DVB-C MODULATION	
Number of channels	4 flexible
Output frequency	170 - 230 / 470 - 862 MHz
Constellation	16, 32, 64, 128, 256QAM
Bandwidth	7 or 8 MHz
Symbol rate	4 ... 6,96 MSps
MER	>32 dB
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	By RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption (no CAM)	2500 mA
Operating temperature	0 - 40 °C

- / QUAD terrestrial and cable module (DVB-T / T2 / C)
- / 1 input / 4 independent tuners
- / Input LOOP
- / Flexible remultiplexing of services on any output channel
- / NIT tables editing, SID remapping, sending or deleting EMM messages and CAT tables
- / Programmable QAM / COFDM output
- / Output of up to 4 channels COFDM / 4 flexible QAM channels
- / High output level
- / Excellent output signal quality with high MER
- / LCN / LCN HD insert
- / Programming through "CM Management" PC software
- / Configuration cloning. Status and configuration report
- / On-site management (FA 510 / CM PR) or remote (FA 524)
- / 2 common interface slots



AV/HDMI INPUT RF OUTPUT

CM 4HD-TC

- / 4 HDMI (HD) inputs
- / Resolution of each input up to 1080p
- / Programmable COFDM / QAM output
- / Programming through “CM Management” PC software
- / Remote management from FA 524 or CM PR

REFERENCE	CM 4HD-TC
Code	082004
INPUT	
Number of inputs	4 (A, B, C, D)
A/V	
Video	-
Input level	-
Impedance	-
Video compression	H.264
Video bitrate	5 - 15 Mbps
Audio compression	AAC-LC, MPEG1-L2
Audio bitrate	128 - 384 Kbps
HDMI Maximum	1080p
OUTPUT	
Number of outputs	1
MIX Port	<1,5 dB
Maximum output level	95 dB μ V
Output regulation	20 dB
DVB-T MODULATION	
Number of MUX	2
Output frequency	170 - 230/ 470 - 862 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/4, 1/8, 1/16, 1/32
MER	>35 dB
DVB-C MODULATION	
Number of MUX	2
Output frequency	50 - 862 MHz
Constellation	16, 32, 64, 128, 256QAM
Symbol rate	4 ... 6,96 Mbps
MER	>40 dB
GENERAL	
Local Programming	Cable USB / RJ45 (LAN)
Remote programming	RJ45 (Internet) (CM Key)
Feeding	5 Vdc
Consumption	3000 mA
Operating temperature	0 - 40 °C



AV/HDMI INPUT RF OUTPUT

CM 4HD-T

- / QUAD Modulator
- / COFDM output
- / Adjustment of encoding parameters
- / SID remapping and NIT table editing
- / Insertion of LCN / LCN HD
- / High output level
- / Programming via PC software "CM Management"
- / Configuration cloning and report generation
- / Remote control integrated into the FA 524 source using CM KEY

REFERENCE	CM 4HD-T
Code	082022
INPUT	
Number of inputs	4 (A, B, C, D)
A/V	
Video	-
Input level	-
Impedance	-
Video compression	-
Video bitrate	H.264 / 5 - 15 Mbps
Audio compression	-
Audio bitrate	AAC-LC, MPEG1-L2 / 128 - 384 Kbps
HDMI	
Resolution	1080p
OUTPUT	
Number of outputs	1
Mixing port	<1,5 dB
Output frequencies	170-230 + 470-862 MHz
Maximum output level	95 dBμV
Output regulation	20 dB
RF output channels	2
Channel bandwidth	7 (VHF) / 8 (UHF) MHz
COFDM modulation mode	2K
COFDM constellation	QPSK / 16QAM / 64QAM
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/4, 1/8, 1/16, 1/32
MER	>32 dB
GENERAL	
Local programming	Por cable USB / RJ45 (LAN)
Remote programming	Por RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption	2400 mA
Operating temperature	0 - 40 °C



AV/HDMI INPUT RE OUTPUT

CM 2AV-T

- / Multifunction headers series CM Encoder 2 A / V to COFDM / DTT
- / 2 audio / video inputs (CVBS)
- / Flexible COFDM output
- / Programming through “CM Management” PC software
- / Remote management from FA 524 or CM PR

REFERENCE	CM 2AV-T
Code	082025
INPUT	
Number of video inputs	2 x CVBS
Video resolution mode	PAL (720x576) / NTSC (720X480)
Video compression	MPEG 2
Number of audio inputs	2 x audio stereo / 0.5-2.5 Vpp
Sample rate	48 KHz
Compression audio	MPEG1, LAYER II
DVB processing	Table insertion PAT, PNT, SDT, NIT
Configuration	NOMBRE DE PROGRAMA, SID, LCN, NETWORK NAME, TSD, ONID, NID, VERSION NIT, LCN, PMT
OUTPUT	
Number of outputs	1 + loop-through (-1,5 dB)
Maximum output level	95 dBμV
Output regulation	20 dB (por software)
Output frequency	170-230 MHz + 470-862 MHz
Output MUXES	1 COFDM
Channel width	7 MHz (VHF) / 8 MHz (UHF)
COFDM modulation mode	2K / 8K
Constellation - FEC COFDM	QPSK/16QAM/64QAM 1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/4, 1/8, 1/16, 1/32
MER	> 32dB
OTHERS	
Programming	PC software “CM management” via USB connected to the FA 524 / CM PR source
Power supply	5 Vdc
Consumption	1,2 A
Working temperature	0 - 40°



AV/HDMI INPUT RE OUTPUT

CM 4AV-TC

- / 4 audio/video inputs (CVBS)
- / Flexible COFDM output
- / Programming through “CM Management” PC software
- / Remote management from FA 524 or CM PR

REFERENCE	CM 4AV-TC
Code	082003
INPUT	
Number of inputs	4 (A1, B1, A2, B2)
A/V	
Video	CVBS
Input level	0,7 - 1,4 Vpp
Impedance	75 Ω
Video compression	MPEG2
Video bitrate	4 - 12 Mbps
Audio compression	MPEG1 Layer 2
Audio bitrate	128 - 384 Kbps
HDMI Maximum	-
OUTPUT	
Number of outputs	1
MIX Port	<1,5 dB
Maximum output level	95 dBμV
Output regulation	20 dB
DVB-T MODULATION	
Number of MUX	1
Output frequency	170 - 230/ 470 - 862 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/4, 1/8, 1/16, 1/32
MER	>35 dB
DVB-C MODULATION	
Number of MUX	-
Output frequency	-
Constellation	-
Symbol rate	-
MER	-
GENERAL	
Local Programming	Cable USB / RJ45 (LAN)
Remote programming	RJ45 (Internet) (CM Key)
Feeding	5 Vdc
Consumption	2060 mA
Operating temperature	0 - 40 °C



SATELLITE INPUT IP OUTPUT

CM 8S-IP

- / OCTO module with 4 SAT inputs and 8 tuners
- / Independent control of each input 13 / 18V - 22KHz - DiSEqC (A / B / C / D)
- / IP output gigabit 1Gbps SPTS / MPTS in UDP / RTP format
- / Up to 64 output streams
- / SAP function
- / IGMP Query and IGMP Auto-Joint
- / Programming via SW PC ("CM Management")
- / Configuration cloning and reporting
- / On-site management (FA 510 / CM PR) or remote (FA 524)

REFERENCE	CM 8S-IP
Code	082294
INPUT	
Number of inputs	4 x RF
RF INPUT	
Number of tuners	8
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Symbol rate	1 - 45 Mbps
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
Telepowering	13/18 - 0/22 V / KHz
Maximum current per LNB input	500 mA
LNB's maximum total current	750 mA
DiSEqC	A / B / C / D
OUTPUT	
Connector	RJ45 - Fast Ethernet
Routing scheme	Unicast / Multicast
Maximum services	64 (SPTS / MPTS)
Protocols	UDP / RTP / QoS / SAP
Features	IGMP Query e IGMP Auto-Joint
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	By RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption	3500 mA
Operating temperature	0 - 40 °C



SATELLITE INPUT IP OUTPUT

CM 8SH-IP

- / OCTO module with 4 SAT inputs and 8 tuners
- / 1 HDMI input
- / 1 USB 2.0 input
- / Independent control of each input 13 / 18V - 22KHz - DiSEqC (A / B / C / D)
- / IP output 1Gbps SPTS / MPTS in UDP / RTP format
- / Up to 64 output streams
- / SAP function
- / IGMP Query and IGMP Auto-Joint
- / Programming via SW PC ("CM Management")
- / Configuration cloning and reporting
- / On-site management (FA 510 / CM PR) or remote (FA 524)

REFERENCE	CM 8SH-IP
Code	082262
INPUT	
Number of inputs	4x RF + 1x HDMI + 1x USB
RF INPUT	
Number of tuners	8
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Symbol rate	1 - 45 Mbps
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
Remote powering	13/18 - 0/22 V / KHz
Maximum current per LNB input	500 mA
Maximum total LNB current	750 mA
DiSEqC	A / B / C / D
USB	
Priority	1
Version	2.0
File system	FAT32 / NTFS
Playback	Autoplay, Lista, Programación horaria
File format	.TS (Transport Stream)
HDMI	
Priority	2
Video / Bitrate	H.264 / 5 - 15 - / Mbps
Audio / Bitrate	AAC-LC, MPEG1-L2 / 128 - 384 - / Kbps
Maximum resolution	1080p
OUTPUT	
Connector	RJ45 - Fast Ethernet
Routing scheme	Unicast / Multicast
Maximum streams	64 (SPTS / MPTS)
Protocols	UDP / RTP / QoS / SAP
Functions	IGMP Query e IGMP Auto-Joint
GENERAL	
Local configuration	Por cable USB / RJ45 (LAN) con FA 524 o CM PR
Remote configuration	Por RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Power consumption (Without LNB, without USB, without CAM, without HDMI)	3500 mA
Operating temperature	0 - 40 °C



SATELLITE INPUT IP OUTPUT

CM 8S 2CI-IP

REFERENCE	CM 8S 2CI-IP
Code	082295
INPUT	
Number of inputs	4 x RF
RF INPUT	
Number of tuners	8
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Symbol rate	1 - 45 Mbps
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
Telepower	13/18 - 0/22 V / KHz
Maximum current per LNB input	500 mA
LNB's maximum total current	750 mA
Common interface	2 x CI
DiSEqC	A / B / C / D
Unicable	SatCR / dCSS
OUTPUT	
Connector	RJ45 - Fast Ethernet
Routing scheme	Unicast / Multicast
Maximum services	64 (SPTS / MPTS)
Protocols	UDP / RTP / QoS / SAP
Features	IGMP Query and IGMP Auto-Joint
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	By RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption (No LNB, no CAM)	2000 mA
Operating temperature	0 - 40 °C

- / OCTO module with 4 SAT inputs and 8 tuners (DVB-S/S2/S2X). Supports multistream
- / BISS compatible
- / Independent control of each input 13 / 18V - 22KHz - DiSEqC (A / B / C / D)
- / Unicable LNB Support: SatCR/dCSS
- / IP output gigabit 1Gbps SPTS / MPTS in UDP / RTP format
- / Up to 64 output streams
- / SAP function
- / IGMP Query and IGMP Auto-Joint
- / Programming via SW PC ("CM Management")
- / Configuration cloning and reporting
- / On-site management (FA 510 / CM PR) or remote (FA 524)
- / 2 common interface slots



2 COMMON
INTERFACE

SATELLITE INPUT IP OUTPUT

CM 8S 4CI-IP

REFERENCE	CM 8S 4CI-IP
Code	082322
INPUT	
Number of inputs	4 x RF
RF INPUT	
Number of tuners	8
Input frequency	950 - 2150 MHz
Input level	40 - 79 dBμV
Symbol rate	1 - 45 Mbps
Modulation type	QPSK / 8PSK / 16APSK / 32APSK
Telepower	13/18 - 0/22 V / KHz
Maximum current per LNB input	500 mA
LNB's maximum total current	750 mA
Common interface	4 x CI
DiSEqC	A / B / C / D
Unicable	SatCR / dCSS
OUTPUT	
Connector	RJ45 - Fast Ethernet
Routing scheme	Unicast / Multicast
Maximum services	64 (SPTS / MPTS)
Protocols	UDP / RTP / QoS / SAP
Features	IGMP Query and IGMP Auto-Joint
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	By RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption (No LNB, no CAM)	2200 mA
Operating temperature	0 - 40 °C

- / OCTO module with 4 SAT inputs and 8 tuners (DVB-S/S2/S2X). Supports multistream
- / BISS compatible
- / Independent control of each input 13 / 18V - 22KHz - DiSEqC (A / B / C / D)
- / Unicable LNB Support: SatCR/dCSS
- / IP output gigabit 1Gbps SPTS / MPTS in UDP / RTP format
- / Up to 64 SPTS/MPTS output IP streams.
- / SAP function
- / IGMP Query and IGMP Auto-Joint
- / Programming via SW PC ("CM Management")
- / Configuration cloning and reporting
- / On-site management (FA 510 / CM PR) or remote (FA 524)
- / 4 common interface slots



4 COMMON
INTERFACE

TERRESTRIAL/CABLE INPUT · IP OUTPUT

CM 4T-IP

REFERENCE	CM 4T-IP
Code	082260
INPUT	
Number of inputs	1x RF
Number of tuners	4
DVB-T / T2 RECEPTION	
Input frequency	110 - 862 MHz
Input level	33-88 dBμV
Constellation - Mode	QPSK, 16, 64, 256QAM 1K, 2K, 4K, 8K, 16K, 32K
DVB-C RECEPTION	
Input frequency	110 - 862 MHz
Input level	46 - 88 dBμV
Constellation - Mode	QPSK, 16, 32, 64, 128, 256 QAM / 6, 7, 8 - / MHz
Symbol rate	0,2 - 7.7 MSps
OUTPUT	
Connector	RJ45 - Fast Ethernet
Routing scheme	Unicast / Multicast
Maximum services	64 (SPTS / MPTS)
Protocols	UDP / RTP / QoS / SAP
Features	IGMP Query and IGMP Auto-Joint
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	By RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption	1700 mA
Operating temperature	0 - 40 °C

- / QUAD terrestrial and cable module (DVB-T / T2 / C)
- / 1 input / 4 independent tuners
- / Input LOOP
- / IP output 100Mbps SPTS / MPTS in UDP / RTP format
- / Up to 64 output SPTS/MPTS
- / SAP function
- / IGMP Query and IGMP Auto-Joint
- / Programming through "CM Management" PC software
- / Configuration cloning. Status and configuration report
- / On-site management (FA 510 / CM PR) or remote (FA 524)



TERRESTRIAL/CABLE INPUT · IP OUTPUT

CM 4T CI-IP

REFERENCE	CM 4T-CI-IP
Code	082261
INPUT	
Number of inputs	1x RF
Number of tuners	4
DVB-T / T2 RECEPTION	
Input frequency	110 - 862 MHz
Input level	33-88 dBμV
Constellation - Mode	QPSK, 16, 64, 256QAM 1K, 2K, 4K, 8K, 16K, 32K
DVB-C RECEPTION	
Input frequency	110 - 862 MHz
Input level	46 - 88 dBμV
Constellation - Mode	QPSK, 16, 32, 64, 128, 256 QAM / 6, 7, 8 - / MHz
Symbol rate	0,2 - 7.7 MSps
Common interface	2 x CI
OUTPUT	
Connector	RJ45 - Fast Ethernet
Routing scheme	Unicast / Multicast
Maximum services	64 (SPTS / MPTS)
Protocols	UDP / RTP / QoS / SAP
Features	IGMP Query and IGMP Auto-Joint
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	By RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption (no CAM)	1900 mA
Operating temperature	0 - 40 °C

- / QUAD terrestrial and cable module (DVB-T / T2 / C)
- / 1 input / 4 independent tuners
- / Input LOOP
- / IP output 100Mbps SPTS / MPTS in UDP / RTP format
- / Up to 64 output streams
- / SAP function
- / IGMP Query and IGMP Auto-Joint
- / Programming through "CM Management" PC software
- / Configuration cloning. Status and configuration report
- / On-site management (FA 510 / CM PR) or remote (FA 524)
- / 2 common interface slots



2 COMMON
INTERFACE

TERRESTRIAL/CABLE INPUT · IP OUTPUT

CM 8TC-IP

- / OCTO terrestrial and cable module (DVB-T / T2 / C)
- / 1 input / 8 independent tuners
- / Input LOOP
- / IP output 100Mbps SPTS / MPTS in UDP / RTP format
- / Up to 64 output streams
- / SAP function
- / IGMP Query and IGMP Auto-Joint
- / Programming via SW PC ("CM Management")
- / Configuration cloning and reporting
- / On-site management (FA 510 / CM PR) or remote (FA 524)

REFERENCE	CM 8TC-IP
Code	082293
INPUT	
Number of inputs	1x RF
Number of tuners	8
DVB-T / T2 RECEPTION	
Input frequency	110 - 862 MHz
Input level	33-88 dBμV
Constellation - Mode	QPSK, 16, 64, 256QAM 1K, 2K, 4K, 8K, 16K, 32K
DVB-C RECEPTION	
Input frequency	42 - 1002 MHz
Input level	46 - 88 dBμV
Constellation - Mode	QPSK, 16, 32, 64, 128, 256 QAM / 6, 7, 8 - / MHz
Symbol rate	1 - 7.2 MSps
Supported annexes	A, B y C
OUTPUT	
Connector	RJ45 - Fast Ethernet
Routing scheme	Unicast / Multicast
Maximum services	64 (SPTS / MPTS)
Protocols	UDP / RTP / QoS / SAP
Features	IGMP Query e IGMP Auto-Joint
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	By RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption	1700 mA
Operating temperature	0 - 40 °C



AV/HDMI INPUT IP OUTPUT

CM 4AV-IP

- / 4 audio/video inputs (CVBS) to IP multicast modulators
- / Encoding parameters setting
- / IP output 100Mbps SPTS / MPTS in UDP / RTP format
- / Flexible remultiplexing of services on IP egress
- / SAP function
- / Up to 16 output streams
- / Programming through “CM Management” PC software
- / Configuration cloning. Status and configuration report
- / Remote management from FA 524 using CM KEY

REFERENCE	CM 4AV-IP
Code	082007
INPUT	
Number of inputs	4 (A1, B1, A2, B2)
A/V	
Video	CVBS
Input level	0,7 - 1,4 Vpp
Impedance	75 Ω
Video compression	MPEG2
Video bitrate	4 - 12 Mbps
Audio compression	MPEG1 Layer 2
Audio bitrate	128 - 384 Kbps
HDMI	
Resolution	576p
OUTPUT	
Connector	RJ45 - Fast Ethernet - 10/100Mbps
Routing scheme	Unicast / Multicast
Maximum services	16 (SPTS / MPTS)
Protocols	UDP / RTP / QoS / SAP
GENERAL	
Local configuration	Por cable USB / RJ45 (LAN)
Remote configuration	Por RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Power consumption	2000 mA
Operating temperature	0 - 40 °C



AV/HDMI INPUT IP OUTPUT

CM 4HD-IP

- / 4 HDMI (HD) inputs to IP multicast modulators
- / Encoding parameters setting
- / IP output 100Mbps SPTS / MPTS in UDP / RTP format
- / Flexible remultiplexing of services on IP output
- / SAP function
- / Up to 16 output streams
- / Programming through "CM Management" PC software
- / Configuration cloning. Status and configuration report
- / Remote management from FA 524 using CM KEY

REFERENCE	CM 4HD-IP
Code	082008
INPUT	
Number of inputs	4 (A, B, C, D)
A/V	
Video	-
Input level	-
Impedance	-
Video compression	-
Video bitrate	H.264 / 5 - 15 Mbps
Audio compression	-
Audio bitrate	AAC-LC, MPEG1-L2 / 128 - 384 Kbps
HDMI	
Maximum	1080p
Output	
Connector	RJ45 - Fast Ethernet
Routing scheme	Unicast / Multicast
Maximum services	16 (SPTS / MPTS)
Protocols	UDP / RTP / QoS / SAP
GENERAL	
Local Programming	Cable USB / RJ45 (LAN)
Remote programming	RJ45 (Internet) (CM Key)
Feeding	5 Vdc
Consumption	2400 mA
Operating temperature	0 - 40 °C



IP INPUT RF OUTPUT

CM IP-TC

- / Input up to 15 IP Unicast / Multicast services
- / Supported protocols: SPTS / MPTS, UDP / RTP, SIP, QoS
- / Support services with different input bit rates
- / Programmable QAM / COFDM output
- / Flexible remultiplexing of services on IP output
- / NIT tables editing, SID remapping, sending or deleting EMM messages and CAT tables
- / LCN / LCN HD insert
- / Output connector or input connector for mixing
- / High output level
- / Excellent output signal quality with a high MER
- / Programming through "CM Management" PC software
- / Configuration cloning. Status and configuration report
- / Remote management from FA 524 using CM KEY

REFERENCE	CM IP-TC
Code	082018
INPUT	
Connector	RJ45 - Fast Ethernet
Routing scheme	Unicast / Multicast
Maximum streams	31 (SPTS / MPTS)
Supported protocols	IEEE 802.3, SPTS/MPTS, UDP, RTP, QoS
Local IP assignment	DHCP / Estática
PCR (Program Clock Reference)	Acorde con ETSI TR 101 290
COMMON INTERFACE	
Slots	-
OUTPUT	
Number of outputs	1
Mixing port	<1,5 dB
Output frequency	5-900 MHz
Maximum output level	95 dBμV
Output regulation	20 dB
DVB-T MODULATION	
Number of channels	3
Output frequency	50-860 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/4, 1/8, 1/16, 1/32
MER	>35 dB
DVB-C MODULATION	
Number of channels	4
Output frequency	50-860 MHz
Constellation	16, 32, 64, 128, 256QAM
Symbol rate	4 ... 6,96 Mbps
MER	>40 dB
GENERAL	
Local programming	Por cable USB / RJ45 (LAN)
Remote programming	Por RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption (without CAM)	1500 mA
Working temperature	0 - 40 °C



IP INPUT RF OUTPUT

CM IP CI-TC

- / Input up to 15 IP Unicast / Multicast services
- / Supported protocols: SPTS / MPTS, UDP / RTP, SIP, QoS
- / Support services with different input bit rates
- / Programmable QAM / COFDM output
- / Flexible remultiplexing of services on IP output
- / NIT tables editing, SID remapping, sending or deleting EMM messages and CAT tables
- / LCN / LCN HD insert
- / Output connector or input connector for mixing
- / High output level
- / Excellent output signal quality with a high MER
- / Programming through "CM Management" PC software
- / Configuration cloning. Status and configuration report
- / Remote management from FA 524 using CM KEY

REFERENCE	CM IP CI-TC
Code	082019
INPUT	
Connector	RJ45 - Fast Ethernet
Routing scheme	Unicast / Multicast
Maximum streams	31 (SPTS / MPTS)
Supported protocols	IEEE 802.3, SPTS/MPTS, UDP, RTP, QoS
Local IP assignment	DHCP / Static
PCR (Program Clock Reference)	According to ETSI TR 101 290
COMMON INTERFACE	
Slots	2
OUTPUT	
Number of outputs	1
Mixing port	<1,5 dB
Output frequency	5-900 MHz
Maximum output level	95 dBμV
Output regulation	20 dB
DVB-T MODULATION	
Number of channels	4
Output frequency	50-860 MHz
Constellation - Mode	QPSK, 16QAM, 64QAM - 2K
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/4, 1/8, 1/16, 1/32
MER	>35 dB
DVB-C MODULATION	
Number of channels	4
Output frequency	50-860 MHz
Constellation	16, 32, 64, 128, 256QAM
Symbol rate	4 ... 6,96 Mbps
MER	>40 dB
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	By RJ45 (Internet) (CM Key)
Power supply	5 Vdc
Consumption (without CAM)	1800 mA
Working temperature	0 - 40 °C



IP INPUT IP OUTPUT

CM IP CI-IP

- / Input up to 31 IP Unicast / Multicast services
- / Supported protocols: SPTS / MPTS, UDP / RTP, SIP, QoS
- / Support services with different input bit rates
- / 2 slots common interface
- / IP output 1Gbps SPTS / MPTS in UDP / RTP format
- / Up to 64 output streams
- / SAP function
- / IGMP Query and IGMP Auto-Joint
- / Programming via SW PC ("CM Management")
- / Configuration cloning and reporting
- / On-site management (FA 510 / CM PR) or remote (FA 524) using CM KEY

REFERENCE	CM IP CI-IP
Code	082037
INPUT	
Connector	RJ45 - Fast Ethernet
Routing scheme	Unicast / Multicast
Maximum services	31 (SPTS / MPTS)
Supported protocols	IEEE 802.3, SPTS/MPTS, UDP, RTP, QoS
Local IP assignment	DHCP / Static
PCR (Program Clock Reference)	According to ETSI TR 101 290
COMMON INTERFACE	
Slots	2
OUTPUT	
Connector	RJ45 - Fast Ethernet
Routing scheme	Unicast / Multicast
Maximum services	64 (SPTS / MPTS)
Local IP assignment	DHCP / Static
Supported protocols	UDP / RTP / QoS / SAP
GENERAL	
Local programming	By USB / RJ45 cable (LAN) with FA 524 or CM PR
Remote programming	RJ45 (Internet) + CM Key
Power supply	5 Vdc
Consumption (without CAM)	1300
Working temperature	0 - 40 °C



OPTICAL TRANSMISSION

CM TO 3 1310

- / They allow the distribution of radio frequency signal over long distances taking advantage of fiber optics
- / Optical output level indicator LED
- / Input level regulation

REFERENCE	CM TO 3-1310
Code	274101
RF INPUT	
Frequency	47 - 1000 MHz
Flatness	±0,75 dB
TV input level	70-80* dBμV
Input level SAT	-
TV + SAT input level	-
Input regulation	20 dBμV
Return losses	≥14 dB
Input impedance	75 Ω
Connector	F type
OPTICAL OUTPUT	
Wavelength	1310 nm
Optical power output	3 dBm
Laser type	DFB
Optical adaptation	>45 dB
Optical connector	SC / APC
Input voltage	88 - 264 Vac
Input frequency	47 - 63 Hz
Peak current	-
LNB Power supply	-
Operating temperature	-20...+55 °C

(*) 59 Ch PAL-I analog channels



OPTICAL TRANSMISSION

CM TO 10 FI-1550

- / Allows the distribution of radio frequency signal over long distances taking advantage of fiber optics
- / Optical output level indicator LED
- / Allows selection of satellite band and polarity
- / Input level regulation

REFERENCE	CM TO 10 FI-1550
Code	274102
RF INPUT	
Frequency	47 - 2150 MHz
Flatness	±0,75 dB
TV input level	70-80* dBμV
Input level SAT	58-78 dBμV
TV + SAT input level	72-84 dBμV
Input regulation	20 dBμV
Return losses	≥14 dB
Input impedance	75 Ω
Connector	F type
OPTICAL OUTPUT	
Wavelength	1550 nm
Optical power output	10 dBm
Laser type	DFB
Optical adaptation	>45 dB
Optical connector	SC / APC
Input voltage	88 - 264 Vac
Input frequency	47 - 63 Hz
Peak current	500 mA
LNB Power supply	13 - 18 Vdc 0 - 22 KHz
Operating temperature	-20...+55 °C

(*) 59 Ch PAL-I analog channels



OPTICAL TRANSMISSION

CM RF 2 · CM RF 4 · CM RF 8

/ Optical splitter with 2, 4 or 8 outputs. CM Headend Compatible

REFERENCE		CM RF 2	CM RF 4	CM RF 8
Code		274103	274104	274105
Inputs / Outputs		1/2	1/4	1/8
Fiber type		G.657.A1		
Connector type		SC / APC		
Working wavelength	nm	1260 - 1650		
Insertion loss	dB @ 1310 nm	3,8	6,9	10,1
	dB @ 1490 nm	3,9	7	10,2
	dB @ 1550 nm	3,9	7	10,3
Dependency loss of polarization	dB	0,15		
Return loss	dB	>60		
Uniformity	dB	<0,8		
Directivity	dB	>55		
Storage temperature	°C	-40 ~ 85		
Work temperature	°C	-40 ~ 85		
Packaging		1		



CM RF 2



CM RF 4



CM RF 8

ACCESSORIES

FA 524

- / High-efficiency power supply
- / With protection fuses against electrical current overload
- / It allows the programming and remote management of complete headend

REFERENCE	FA 524
Code	080003
Input voltage	90-253 Vcc
Input frequency	50-60 Hz
Output voltage	24 Vdc
Peak current	5A
Maximum power	120W
Type	Modular
Working temperature	0-45°
Programming mode	USB Connector
Programming	Via PC
Remote management	RJ45 Connector



ACCESSORIES

FA 524 KEY

- / High-efficiency power supply
- / With protection fuses against electrical current overload
- / It allows the programming and remote management of complete headend
- / CM Key included

REFERENCE	FA 524 KEY
Code	082045
Input voltage	90-253 Vcc
Input frequency	50-60 Hz
Output voltage	24 Vdc
Peak current	5A
Maximum power	120W
Type	Modular
Working temperature	0-45°
Programming mode	USB Connector
Programming	Via PC
Remote management	RJ45 Connector



ACCESSORIES

CM AMP 114

- / CM serie amplifier
- / Gain 20dB
- / Output level 114dB μ V
(DIN 45004B)

REFERENCE	CM AMP 114
Code	082329
Inputs	N. 1
Outputs	N. 1
Frequencies	47 -694 MHz
Gain	20 dB
Regulation	10 dB
Output level DIN 45004B	114 dB μ V
Return losses	>10 dB
Noise figure	<3 dB
Power supply	100-240 V
Power consumption	0,9 W



ACCESSORIES

CM PR • FA 55

- / It allows the programming of CM Headend modules.
- / Programming via CM Management (USB port).
- / Programming via CM Management in remote (LAN / Internet).
- / Feeding from CM module already fed via FA 55 PSU

REFERENCE	CM PR
Code	082014
Ports	Ethernet, USB (Tipo B)
Feeding	14 PIN HE bus.
Dimensions	115x28x48 mm

REFERENCE	FA 55
Code	082010
Feeding	100-240 Vac / 46-63 Hz
Output voltage	5 Vdc
Max. output current	5 A



CM PR + FA 55

CABECERA CM

CMKEY

Remote
management
key

REFERENCE	CH3 TR	CHM TR	CHR TR
Code	220005	080005	080006
Description	Wall-mount 3 CM modules	Wall-mount 6 CM modules	19" rack 6 CM modules
Number of modules	2 + Power supply	6 + Power supply	6 + Power supply
Mounting	Wall	Wall	Rack 19"
Height in rack units	-	-	6 U
Measures	187x265x26 mm	427x265x26 mm	475x265x200 mm
Material	Galvanized steel	Galvanized steel	Galvanized steel

ACCESSORIES

CM KEY

- / CM Key allows the remote connection to the power supply FA 524 through the CM Management software (PC Software that allows the programming of the CM Headend via USB cable or remotely). As it is linked to the power supply, it's possible to have access to all the modules connected to the power supply only if connected to the internet. It's needed a user key and a password to identify it on the remote server.

CH 3 TR · CHR TR · CHM TR



ADALTRA

— we make the connection —

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