



## Remotely Controlled NTU/Media Converter

The H.CON/MA is the industry's first NTU for FTTx or corporate networks which can be remotely managed and maintained eliminating the need of a costly SNMP agent and scarcely available IP addresses (via embedded MA™ chip controller). It converts 100Base-FX signals from the Access node into 10/100Base-TX connected to the user, ensuring fail free interconnection to any type of device or network. While designed as a simple device, a rich and comprehensive set of monitoring and control functions is available from any master unit (MA™ enabled) located in the Access node or network center. The device supports the following features: FEF (Far End Fault) to verify the fiber link integrity, FP (Fault Propagation) for network resiliency and SLE (Subscriber Link Emulation). SLE, a most advanced Fault Propagation mechanism, propagates failure of the subscriber (connected to H.CON/MA) all the way to the Access switch respective port (and vice-versa) without affecting the fiber link

connecting the two devices (the H.CON/MA remains under full control)- The SLE feature is enabled through remote management. The device is housed in a rugged metal case with massive free-air cooling and equipped with an internal wide-range switching power supply for safety, ease of installation and reliability. Optional DC powered, industrial temperature range (ETR) and wall mountable models are available. Distance ranges from 2km over MM fiber up to 150km over SM fiber. The H.CON/MA is also available in SFS (Single Fiber Strand) versions saving up to 50% on the cable plant, providing a cost effective and economical solution for FTTx environments. The device supports extended MTU (64 ÷ 1916 bytes). When remote device is not MA™ enabled, the H.CON/MA switches automatically to a normal NTU/Media Converter operation, consequently avoiding any interoperability issues. The H.CON/MA device supports the Offline Configuration Facility.

## Remote NTU Management

When the H.CON/MA is connected over a fiber link to a remote device which is MA™ enabled and SNMP managed (*MetroStar* module, or S.CON1M/MA), the H.CON/MA main menu may be invoked. This menu contains the Device status and Device control.

**Device status** contains the following information: F/O Link Status, T/P Link Status, TP Link Configuration (Auto-Negotiation, Duplex mode, and line data rate), Channel Upstream bandwidth, TP port connection mode, Pause mode (Flow Control), and Fault Propagation mode

**Device Control** provides the following management functions:

- Loop-Back test and Extended Loop Back (ELB) through remote management
- Fiber Link Integrity: continuous (every 10msec) verification of the fiber link
- Set data rate: Allows forcing 10 or 100Mbps onto the TP port.
- Set A/N mode: NTU's TP port may be set to Auto-Negotiation or Non A/N mode.
- Set Fault Propagation ( FO>>TP)
- Set Duplex mode: Allows forcing of HDX or FDX onto the TP port
- Set Pause mode ( Flow control)
- Set Upstream bandwidth: Allows supplying user with different service programs, from 256K to 100Mbps, either symmetrical or asymmetrical up and downstream.
- Reset device and Restore device defaults

All these functions - unless intended otherwise - do not disrupt user data flow and do not affect the used bandwidth.

## General Specifications

### Standard Compliance

IEEE802.3/802.3u, 10Base-T, 100Base-TX, 100Base-FX, FDSE  
 Frame length range: 64 ÷ 1916 bytes  
 Supports 1K MAC addresses

### TP Port

Shielded RJ-45, MDI-X, 100m over STP  
 Cat. 5 cabling; Auto-Negotiation or forced mode (10/100 and FDX/HDX) via management  
 Fault Propagation through SLE feature

### Diagnostics

4 LEDs/6 functions: Power ON, TP Link/Activity, F/O Link/Activity, MA Active

### Conversion Method

Buffered Media Domain, FDX Flow Control (IEEE 802.3X), HDX Back Pressure, Auto Negotiation, MA™ managed.

### FX port

Duplex SC or ST, FDX, FEF, MM fiber 1310nm - output power -20dbm min., Sensitivity -30dbm or better. For SM :refer to Data Sheet DS-FO SFS- 1310/1550nm or 1550/1310nm

### Management

Remote, MA™ (Micro Agent) based technology  
 Managed by FibroLAN's **MetroView** Device Manager

## Environmental and Physical

### Power Supply

Internal, 100÷240VAC, 50÷60Hz  
 IEC connector  
 -48-VDC (-36÷ -72VDC) power supply - optional

### Power Consumption

4 Watts max.

### Temperature

Operating: 0°C÷45°C  
 Extended Temperature Range (optional)  
 Storage: -20°÷+80°C

### Dimensions

120x170x40mm

### EMC

EMC: EN 300 386 V1.3.3:2005-04  
 EN 55022/ EN 55024 AS/NZS CISPR 22:04  
 FCC CFR47 part 15 sub B Class A

### Safety

EN 60950-1:2001

### Humidity

10%÷90% non-condensing

### Weight

400gram

## Ordering Information

Part #	Model	Description
3101	H.CON/MA	10/100TX-FX converter/Access device, duplex SC, MM, 2km, 1310nm, MA
3102	H.CON/MA/SMR7	10/100TX-FX converter/Access device, duplex SC, SM, 7km, 1310nm, MA
3103	H.CON/MA/SMR	10/100TX-FX converter/Access device, duplex SC, SM, 15km 1310nm, MA
3104	H.CON/MA/SM	10/100TX-FX Converter/Access device, duplex SC, SM, 25km, 1310nm, MA
3111	H.CON/MA/SM-TL	10/100TX-FX Converter/Access device, wall mountable, extended MTU support, duplex SC, SM, 25km, 1310nm, MA
3115	H.CON/MA/SM-TL-48	10/100TX-FX Converter/Access device, wall mountable, extended MTU support, duplex SC, SM, 25km, 1310nm, -48VDC PS, including 3m power cable, MA
3105	H.CON/MA/SM/L	10/100TX-FX Converter/Access device, SC, SM, 40km, 1310nm, MA
3108	H.CON/MA/SM/L2	10/100TX-FX Converter/Access device, SC, SM, 70km, 1310nm, MA
3109	H.CON/MA/SM/L3	10/100TX-FX Converter/Access device, SC, SM, 100km, 1550nmDFB, MA
3110	H.CON/MA/SM/LX	10/100TX-FX Converter/Access device, SC, SM, 100km, 1550nmDFB, MA
3106	H.CON/MA/SMRF13	10/100TX-FX Converter/Access device, simplex SC, SM, Single Fiber Strand (SFS), 20km, 1310nm Tx/1550nm Rx, MA
3107	H.CON/MA/SMRF15	10/100TX-FX Converter/Access device, simplex SC, 20km, SFS, 1550nm Tx/1310nm Rx, MA
3112	H.CON/MA/SMRF13-TL	10/100TX-FX Converter/Access device, wall mountable, extended MTU support, simplex SC, SM, 20km, SFS, 1310nm Tx/1550nm Rx, MA
3113	H.CON/MA/SMLF13-TL	10/100TX-FX Converter/Access device, wall mountable, extended MTU support, simplex SC, SM, 40km, SFS, 1310nm Tx/1550nm Rx, MA
3117	H.CON/MA/SMXF13-TL	10/100TX-FX Converter/Access device, wall mountable, extended MTU support, simplex SC, SM, 80km, SFS, 1310nm Tx/1550nm Rx, MA
3116	H.CON/MA/SMRF1313	10/100TX-FX Converter/Access device, simplex SC, SM, 20km, SFS, 1310nm Tx/1310nm Rx, MA
3114	H.CON/MA/ETRX/SMLF13/PS48	MA managed 10/100 TX-FX converter/Access device, SC connector, SM Single fiber strand, 1310nmTx/1550nmRx, 40km, Extended temperature range -25C to +70C, -48DC power supply
B097	PS48	DC (-36÷-72VDC) PS instead of AC PS
B098	ETR	Extended Temperature Range (-10°C÷+70°C) option
B012	CTF-RM	19" Rack shelf for installation of up to 3 H.CON/MA devices
B161	SCH-WM	Wall mount kit

*Specifications are subject to change w/without prior notice*

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