

## CTDI MicroNode 100/120/150

### Optical Transceiver (ONT friendly)



Der MicroNode 1x0 ermöglicht Vorwärts- und Rückweg-Übertragung für PON, RFoG und Hybrid PON-Architekturen. Er wurde so konzipiert um auf derselben Faser in einem passiven optischen Netz (PON) sämtliche Dienste wie Video, Data und Voice zu übertragen. Somit bietet es in jedem passiven optischen Netz unter Verwendung der standardmäßigen optischen Wellenlängen die Möglichkeit die traditionellen Kabelnetz-Dienste (analoges TV, DVB-C, Docsis) bis zum Teilnehmer zu übertragen. Durch die Erweiterung des optischen Netzes zum Teilnehmer wird die Wartung wesentlich vereinfacht ohne dabei auf etablierte Technologie (Kabel-Headend, Docsis) verzichten zu müssen.

*CTDI's MicroNode 120 Forward and Return Path Transceiver for PON, RFoG, and Hybrid PON networks delivers advanced bi-directional, interactive RF services over a passive fiber optic distribution network. It is designed to operate on the same fiber as a working Passive Optical Network (PON) access/distribution system, giving you the flexibility to support all voice, video or data services on a common infrastructure. The MicroNode 120 gives you the freedom and flexibility to work with any PON solution that uses industry standard optical wavelengths, and serves as the optical transport layer for RF video or DOCSIS technologies. By extending the optical network directly to a home or building, the MicroNode 120 eliminates neighbourhood HFC nodes and the annual testing and maintenance required to operate them. It provides bi-directional services over extended RF frequencies (up to 1.1Ghz) while being agnostic to headend equipment, and customer premises equipment; while preserving today's operating processes.*

#### Features

- GPON, GEAPON, BPON-kompatibel
- Auf 1,1 GHz erweitertes HF-Spektrum
- Einsatz der traditionellen CATV-Technik (HE, STB)
- Transparenter Rückweg
- Optionale automatische Regelung
- Unterstützt die meisten Dienste ohne Notwendigkeit für Hausverstärker
- Speisung über 75Ohm-Kabel
- Einfache und flexible Installation
- Betrieb in Single-Faser-PON-Architekturen (bis 32 Anschlüsse)
- Installation in fertigen ONT-Gehäusen
- Speisung über 12 VDC-Quelle
- Unterstützung für Fernspeisung

#### Features

- GPON, GEAPON, BPON compatible
- Extended RF spectrum
- Universal HFC set top box and head-end support
- Transparent return path capability (protocol and modulation format agnostic)
- Optical AGC with positive RF up-slope
- Support most in-home applications without amplifiers
- Multiple set-top box support
- In-home power over 75ohm coax cabling
- Flexible Installation
- Operate on a single PON fiber architecture (up to 32 drops)
- Installs into any CTDI home ONT enclosure
- Powered via an independent 12 VDC power source
- Power over Coax supported

**Spezifikationen / Specifications (MicroNode 120)**

Physical		Return Path Characteristics	
Dimensions W x H x D	1.2" x 3.5" x 5" (30mm x 89 mm x 127 mm)	Wavelength	1590nm
<b>Indicators/External Alarms</b>		Output Power	+2 dBm to +4 dBm
Green LED power indicator		Input dynamic range	+15 dBmV to +40 dBmV
Red LED loss of signal indicator		Frequency response	MNTH121: 5MHz to 42MHz MNTH124: 5MHz to 65MHz
<b>Optical Interface</b>		Compatible with DOCSIS, SCTE55-1 & SCTE55-2	
1 recessed SC/APC female fiber connector		<b>Power and Environmental</b>	
<b>Customer Interface</b>		Operating temperature range	-40°C to +65°C
75 ohm coax "F" connector		Humidity	5% to 95% non-condensing
<b>Forward Path Characteristics</b>		Power input voltage	10 to 16VDC (12VDC nominal)
Input wavelength: 1545-1560nm		Power consumption	3 watts
Input power range: 0 to -6 dBm		<b>Standards and Certifications</b>	
RF Output @ 550MHz: +18dBmV/ch ±2dBmV		TUV listed, CE mark certified	
Frequency response:		Meets or exceeds FCC part 15b	
MNTH121: 50MHz to 1.1GHz		IEC 60825-1:1993+A1:1997+A2:2001	
MNTH124: 88MHz to 1.1GHz		RoHS	
Up-tilt 50Mhz to 1.1GHz: 3dB			
CNR @ -6dBm input power: 48			
CSO @ 0dBm input power: 60			
CTB @ 0dBm input power: 65			

**MicroNode 100**


- ✓ **No ONT Support**
  - 1310nm Upstream may conflict with PON wavelength
- ✓ **Standard 1550nm Downstream**

**MicroNode 120**


- ✓ **ONT-Friendly**
  - 1590/1610nm Upstream avoids wavelength conflict
- ✓ **Standard 1550nm Downstream**

**MicroNode 150**


- ✓ **ONT Supported**
  - 1590/1610nm Upstream avoids wavelength conflict
  - Port for ONT
- ✓ **Standard 1550nm Downstream RF**
- ✓ **WDM for PON support**

