MoCA Access™ Control Unit

in:xtnd Control C251 is a MoCA over coax access node.

in:xtnd Control C251 is capable of 2.5 Gbps on one RF-port supporting up to 31 InCoax Access modems.

in:xtnd Control C251 communicates with InCoax Access modems using the MoCA Access™ 2.5 standard.

KEY FEATURES

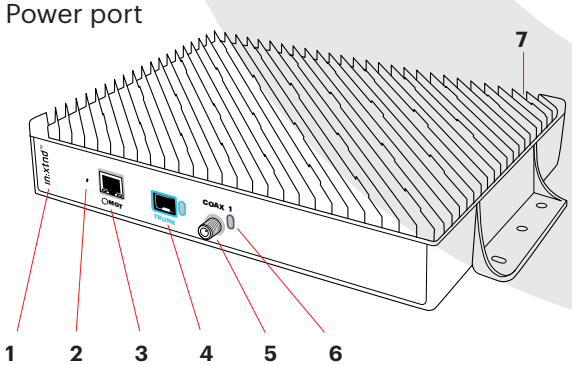
- Designed for service providers delivering internet broadband and triple play services
- Delivers up to 2.5 Gbps on the RF-port (up to 3.2 Gbps)
- Delivers IPTV, VoIP and high-speed internet
- Operational bands between 400–1675 MHz
- Coexist with terrestrial, satellite- and cable-TV services
- Delivers Ethernet broadband through existing in-building coaxial cables and antenna outlets
- Fast and cost-effective in-building deployment
- 17dBm output power
- Based on MoCA Access™ 2.5 Profile D
- Approved for both Europe, North America and Australia
- Auto Configuration by ZTP (Zero Touch Provisioning)

in:xtnd Control C251

in:xtnd Control C251 is a one channel MoCA over coax access node, capable of 2.5 Gbps broadband services on the RF-port, supporting up to 31 InCoax Access modems.
It communicates with the Access modems using the MoCA Access 2.5 standard.
Auto configuration by Zero Touch Provisioning (ZTP) functionality makes it easy, fast and cost-effective to deploy new systems or add new devices.

Indicators & Connections

1 Controller status indicator
2 RESET - System reset button
3 MGT - System Manager LAN port
4 TRUNK - Fiber port
5 COAX - Channel network connections
6 Coax channel status indicators
7 Power port



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Specification and availability are subject to change.
All values are typical unless otherwise noted.

TECHNICAL SPECIFICATIONS

Performance
- MoCA over coax
- Southbound MoCA Access 2.5 Profile D (based on)
- 10 Gbps WAN interface
- 2.5 Gbps throughput (3.2 Gbps in turbo mode)
- 31 modems on port
- MoCA bands: AA, AB, AC, AD, AE
- Frequency range: 400 - 1675 MHz
- RF-channel bandwidth: 100 MHz
- Bonded operation 3, 4 or 5 RF-channels supporting
- MAC Rate typically 1.5/2.0/2.5 Gbps (up to 3.2 Gbps)
- PHY/MAC rate: up to 730/600 Mbps per 100 MHz RF channel
- 17 dBm max output power; automatically adjusted per modem
- Configurable beacon frequency

Physical
- Northbound port
  - 1x SFP+ port[1]: Multi Source Agreement (MSA) compliant, SERDES – 10 Gbps data rate, SFF8472 – Diagnostics interface
- 1x Management LAN port: 10/100 Mbps, configuration and statistics port; RJ-45 Connector, support CAT5 UTP
- F-female connector - 3/8-UNEF32, 75 Ω
- Reset button for executing system reset and enter a default state

Indicators
- Power on-, Management-, Trunk, Coax Link traffic and alerts

Dimensions & Weight
- 12.7 × 2.2 × 7.7 in (W × H × D)
- 7.1 lb

Environmental
- Operating Temperature: -13 °F to +122 °F
- Humidity (RH): 20% to 80%
- Altitude: max 1.24 mi
- Dynamic temperature control with cooling redundancy
- Abnormal operation conditions alarms
- Storage (non-condensing): -40 °F to +158 °F and 5% to 90%
- RoHS, RoHS2, UL 94 V0

Power
- 12 VDC, 5 A nominal
- Power consumption normally 17 W
- Automatic power on after power grid failure

IEEE Standards
- IEEE 802.3 (Ethernet)
- IEEE 802.3u (Fast Ethernet)
- IEEE 802.1p (Priority tags)
- IEEE 802.1q (VLAN with full VLAN-ID range. Up to 500 VLAN Configurable internal VLAN for policing, shaping and prioritization for ingress untagged frames)
- IEEE 802.1ad (QinQ)

Approvals
- Marking: CE, FCC, IC, cNUS, RCM
- EMC: EN55032:2015 Class A, EN55035:2017, FCC Part 15 B Class A, ICES-003 Class A
- Safety: IEC62368-1:2014, EN62368-1:2014 + A11:2017, AS/NZS 62368.1:2018, CSA/UL 62368-1:2014
- ROHS: ROHS 2.0

Security
- DHCP snooping, Option 82 rewrite and trusted/untrusted clients, limit setting, configurable options per VLAN
- Blocking of unknown CPE
- Broadcast storm protection from clients
- Support for PPPoE IA option 0x105 Remote ID

Multicast
- IGMP snooping; v1, v2, v3 (partially)
- IGMP filtering per VLAN
- Configurable IGMP timeout
- MVR
- Bandwidth reservation per multicast group

QoS
- Traffic classification
- Mapping and remarking
- Congestion management
- Strict priority, four separate queues for broadcast, multicast and unicast
- Configurable rate limitation per queue
- Configurable upstream/downstream ratio

Management
- IPv4 WEB GUI via https
- SOAP/XML interface via https
- Statistics and system/version information
- Auto Configuration by ZTP (Zero Touch Provisioning)
- Define and assign service profiles
- Built in spectrum analyzer
- Access through management VLAN or separate management LAN port
- Remotely upgradable

[1] The SFP+ models below have been tested and verified with the InCoax product.

Copper: MikroTik 10G S+RJ10 and Ubiquiti 10G UDC-2.

Fiber MM: Ubiquiti 10G UF-MM-10G

Fiber SM: InCoax 10G OS-SP96-3110D, Ubiquiti 10G UF-SM-10G, Ubiquiti Bi-Di UF-SM-10G-S, Finisar FTLX1475D3BTL, NorthLab NORT-1031-LR, FS SFP-GE-BX BiDi 1Gbps and FS 1000MBASE-BX. BiDi SFP+

About InCoax Networks

InCoax Networks AB (publ) is reusing existing property coaxial networks for broadband access in Fiber-To-The-Home (FTTH) deployments for Communication Service Providers (CSP) globally.

The technology is a high performance, future proof, reliable and cost-effective complement to fiber, that reduces installation time and improves take-up rate, to boost digital inclusion and Internet access for all.

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