

RPHY system

Significant cost savings in operation and energy consumption

Headends within 80-150 km can be merged

The distance between the headend and NODE can be significantly increased

Elimination of analog headends becomes possible

CableOS system instead of analog headend, which only occupies 1U space (~ 15,000 HP)

Full IP communication up to the NODE, eliminating all issues with analog technology

Supports DOCSIS 2.0, 3.0, 3.1 technologies and modems together

Fully remotely manageable network

Subscriber section can remain unchanged

Services can remain uninterrupted during system transition



The *CableOS Broadband Platform* system handles program signal, modem, and overall system control.

RPHY NODE is used instead of HFC NODE.

QAM (DVB-C, DOCSIS) signal generation takes place in the RPHY NODE.

Significant signal-to-noise ratio improvement - MER, BER enhancement.

N+ x systems can be retained as needed.

Monitoring functions, interference deactivation throughout the entire network.

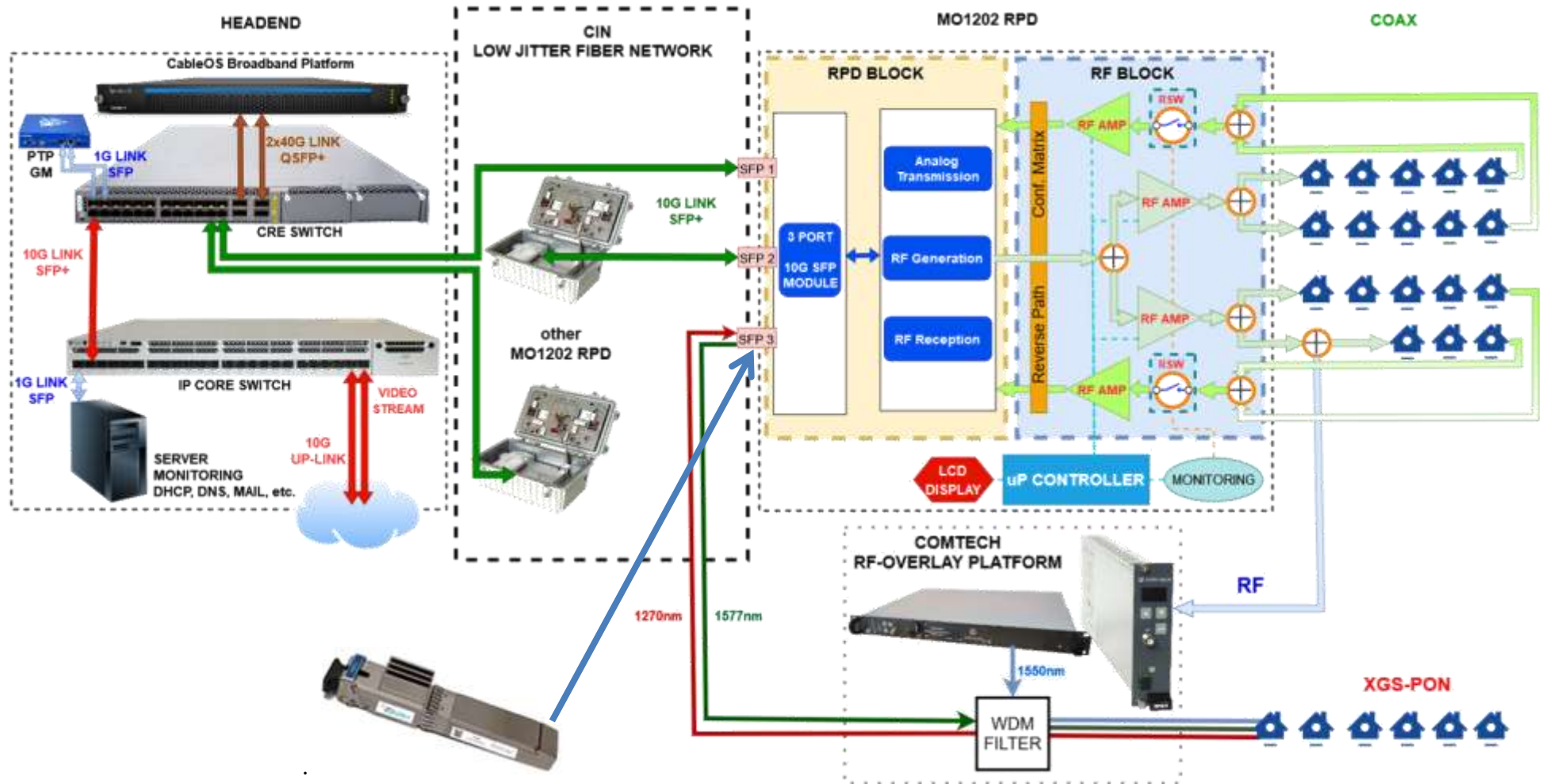
The RPHY NODE is remotely manageable and fully electronically adjustable.

The RPHY NODE has 2 additional SFP expansion module slots.

Additional RPHY NODE or XGSPON system can be served from the expansion module slots.

With the use of the FIN module, a smaller XGSPON segment can be created to serve the system

DAA - RPHY system



FIN module - 10G SFP+ XGS-PON OLT

Network monitoring software with a graphical user interface

ComTech ComMon 4.0 is a state-of-the-art, scalable network management system (EMS) optimized for cable television networks. The software is suitable for managing all SNMP-based standard solutions as well as handling the robust COMTECH protocol, allowing for the simultaneous use of popular network management technologies. Additionally, this new version offers a completely web-based graphical client with responsive functionality, making it accessible on various smart devices. In addition to performing remote measurement and control tasks, the following functions are available for network management:

- Database that stores all measured variables for capturing statistical trends.
- Customizable time-based graphical representation to support error prediction.
- Two types of network structure representations: one showing real cable connections between devices, the other displaying logical subordination relationships between network elements and head-end units.
- Email-based alert system for immediate notification of maintenance technicians and network operators in case of any malfunction.
- Ability to add unmonitored, symbolic devices (splitters, directional couplers, house amplifiers) for accurate mapping of the actual network structure.
- Option to create device groups for the independent, structured representation of head-ends.
- One-click access to statistics for a quick overview of device types, statuses, and firmware versions.
- Summarized statistics on the status of noise suppressors for quick identification of faults when using the COMTECH Automatic Noise Management (RSW) system
- Automatic firmware downloads to keep the network up to date.



Structured view

Device control management

Graphic representation of measurements

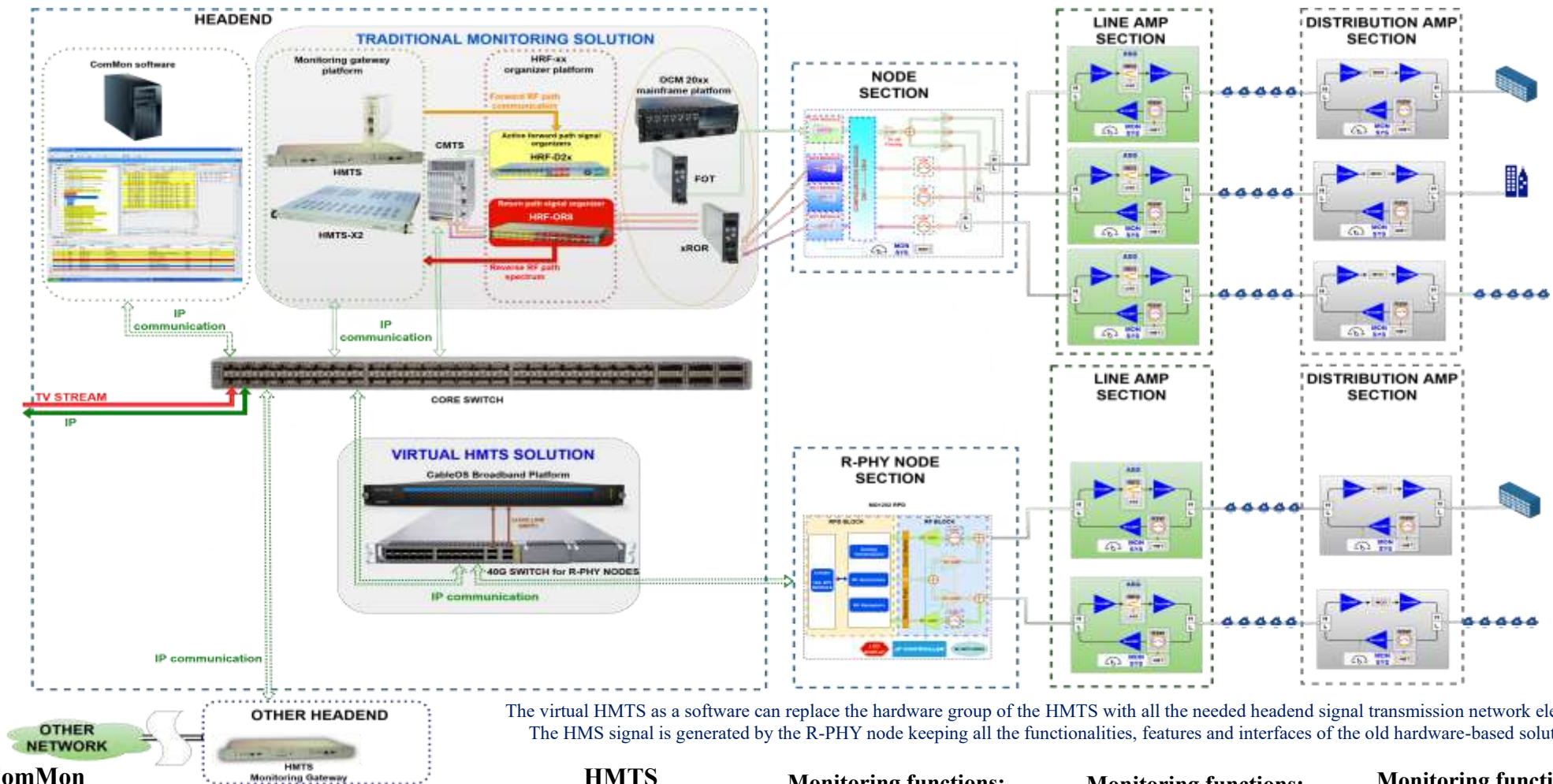


Summary tables

Tile layout - Easy to use on a small screen

Table-based alarm management

ComMon - Monitoring system



ComMon

- Platform-independent solution
- Application of multiple protocols together
- GUI with expandable language support
- Web browser-based access
- An optimized version installed on dedicated server

HMTS
COM-MON, SNMP protocol
HMTS-X2
HMS, SMC, SNMP protocol

User-friendly interface

Configurable

- automations
- alerts
- custom notifications

Robust communication

Monitoring functions:

- Power voltage
- Optical signal levels
- Transmitter
- Receiver
- Noise, interference levels
- RF signal levels
- Temperature

Intervention functions:

- Suppression of ingress
- Activation of HPF 20MHz

Monitoring functions:

- Power voltage
- RF signal levels
- Noise, interference levels
- Temperature

Intervention functions:

- Suppression of ingress
- Activation of HPF 20MHz

Monitoring functions:

- Power voltage
- RF signal levels
- Noise, interference levels
- Temperature

Intervention functions:

- *Suppression of ingress (optional)*