INFINITYLINK ATSC 3.0 TRANSITION OVER FIBER AND IP SOLUTIONS

As TV stations and networks start the migration from ATSC 1.0 to 3.0, there will be the need to make this migration as seamless as possible and accommodate the different rates of adoption of the new standard. To that effect, Artel's InfinityLink has solutions addressing the next-generation, over-the-air broadcast and content delivery for the new IP-based ATSC 3.0, while retaining the legacy signal transport for ATSC 1.0 transport.

Studio to transmit links for the current ATSC 1.0 support either ASI/SMPTE310 or uncompressed HD/SD video over dedicated leased or owned fiber optic services. In some applications links are supplied by local telco or service providers. In other applications the transport network is supplied by an IP GigE service.

InfinityLink packages two distinct solutions with all the necessary platform components and optical and/or electrical transceivers, ready for interconnection with either customer-furnished, single-mode fiber or a local, carrier-supplied IP GigE service.

Figure 1. shows the InfinityLink ATSC 3.0 Transition over Fiber solution for dark fiber. This solution contains the following elements and features:

- 4x SDI/ASI Feeds from Tower ENG Receivers to Studio
- Bi-Directional Uncompressed SDI – 3G/HD/SD/ASI/SMPTE-310
- Gigabit Ethernet with VLAN Support (3 x RJ-45)
- Built-In IL Management Software (Browser Based)
- SNMPv2 Support
- Internal 20x20 Electrical Router (Local/Remote Control)
- Redundant PSUs with Load Sharing
- IL6000 Requires only 1RU of Rack Space
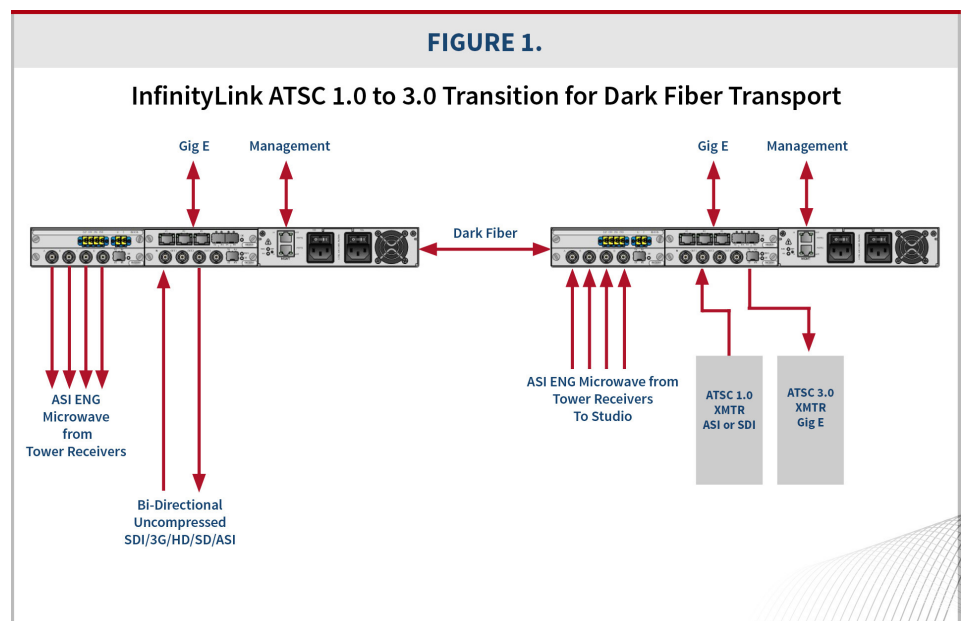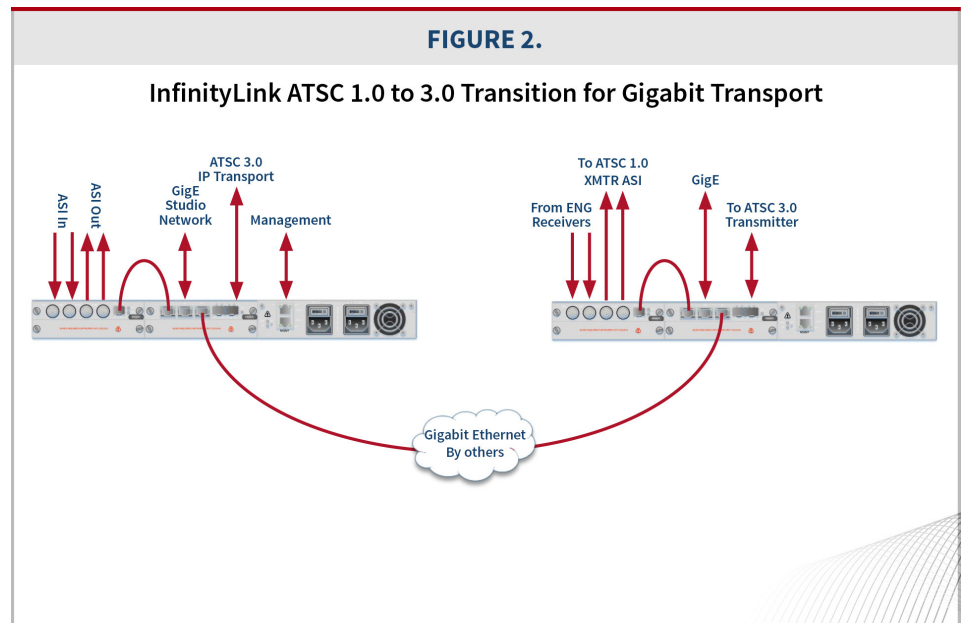- Low Power Consumption < 100 watts

FIGURE 1.

InfinityLink ATSC 1.0 to 3.0 Transition for Dark Fiber Transport

Figure 2. shows the InfinityLink ATSC 3.0 Transition over IP solution for GigE. This solution contains the following elements and features:

- 2 x ASI Bi-Directional
- 2 x ASI for ENG Backhaul from tower to studio
- 2 x ASI for ATSC 1.0 Transmitter Feed – studio to tower
- Gigabit Ethernet with VLAN Support (3x RJ-45)
- Built-In IL Management Software (Browser Based)
- SNMPv2 Support
- Internal 20x20 Electrical Router (Local/ Remote Control)
- Redundant PSUs with Load Sharing
- IL6000 Requires only 1RU of Rack Space
- Low Power Consumption < 100 watts

FIGURE 2.

InfinityLink ATSC 1.0 to 3.0 Transition for Gigabit Transport

ASI In
ASI Out
GigE Studio Network
ATSC 3.0 IP Transport
Management
To ATSC 1.0 XMTR ASI
From ENG Receivers
GigE
To ATSC 3.0 Transmitter
Gigabit Ethernet By others

About Artel Video Systems

Artel is a world-class provider of innovative, real-time, multimedia delivery solutions serving global markets. Artel's integrated IP- and fiber-based solutions include the award-winning DigiLink media transport platform; InfinityLink broadcast media transport solutions; and FiberLink, fiber optic transmission products. Artel Video Systems is an employee-owned business.