1. Record Nr. UNINA9910821181303321 Autore Hood Dave <1945-> Titolo Gigabit-capable passive optical networks / / Dave Hood, Elmar Trojer Pubbl/distr/stampa Hoboken:,: Wiley,, c2012 [Piscatagay, New Jersey]:,: IEEE Xplore,, [2012] **ISBN** 1-280-59166-8 9786613621498 1-118-15606-4 1-118-15607-2 1-118-15558-0 Edizione [1st edition] Descrizione fisica 1 online resource (445 p.) Altri autori (Persone) TrojerElmar Disciplina 621.38/275 Soggetti Passive optical networks Gigabit communications Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Introduction -- System requirements -- Optical layer -- Transmission convergence layer -- Management -- Services -- Other technologies. Enables engineers to better understand, implement, and comply with Sommario/riassunto G-PON standards A passive optical network (PON) is a point-tomultipoint, fiber-to-the-premises network architecture in which unpowered optical splitters enable a single optical fiber to serve multiple premises. PONs consist of an optical line terminal at the service provider's central office and a number of optical network units near the end users. Compared with point-to-point architectures, PONs reduce the amount of fiber and central office equipment required. Gigabit-capable PONs (G-PONs) are today's access network sweet spot, optimized to deliver IPTV and other high-bandwidth services at a

reasonable cost. G-PONs have been deployed in numerous networks across the globe, and the trends indicate higher growth for G-PONs than other PON technologies. Written by experts at the heart of G-PON development, standardization, and deployment, this text explains why the G-PON standards are what they are and how they impact the development of communication networks. It fully examines the

historical development of the G-PON standards, pointing out alternatives and comparing them to other PON standards. The book begins with an introduction to the evolution of G-PON technology and standards. Next, it covers: . System requirements . Optical layer . Transmission convergence layer . Management . Services . Other technologies such as Ethernet PON, wireless broadband, and access migration This book not only examines current standards and technology, it also looks at evolving technology, discussing the advantages and disadvantages of various access networks currently under investigation. Gigabit-capable Passive Optical Networks is essential for all engineers responsible for developing and maintaining G-PONs, providing them with information and guidance they need to fully understand, implement, and comply with the standards.