

 **TEKGEM**

SHIELD



PROTECTING
CYBER SECURITY

WHAT IS TEKSEM SHIELD?

Teksem Shield is an all-in-one industrial secure file transfer solution.

It has long been established that connecting removable media to industrial automation & control systems (IACS) poses a significant threat.

Our customers need to be able to transfer files into, around and out of industrial networks on a regular basis. However, this has the potential to introduce vectors or access points for malware that could compromise the safety and security of critical infrastructure.



Teksem Shield has been built with this in mind and is made up of three parts that work seamlessly together:

1. A dedicated removable media gateway which allows you to securely transfer files to and from removable media devices.
2. A secure browser-based network file transfer system that allows you to safely and securely move files across your network levels.
3. A dedicated hardware appliance that incorporates both removable media and network secure file transfer software in an easy to use all-in-one kiosk.



REMOVABLE MEDIA GATEWAY

Shield is a fully secured physical appliance that allows users to scan removable media devices for threats before they can be transferred over your network.

Shield uses the industry leading Microsoft Windows Defender for real-time Virus and Threat protection.*

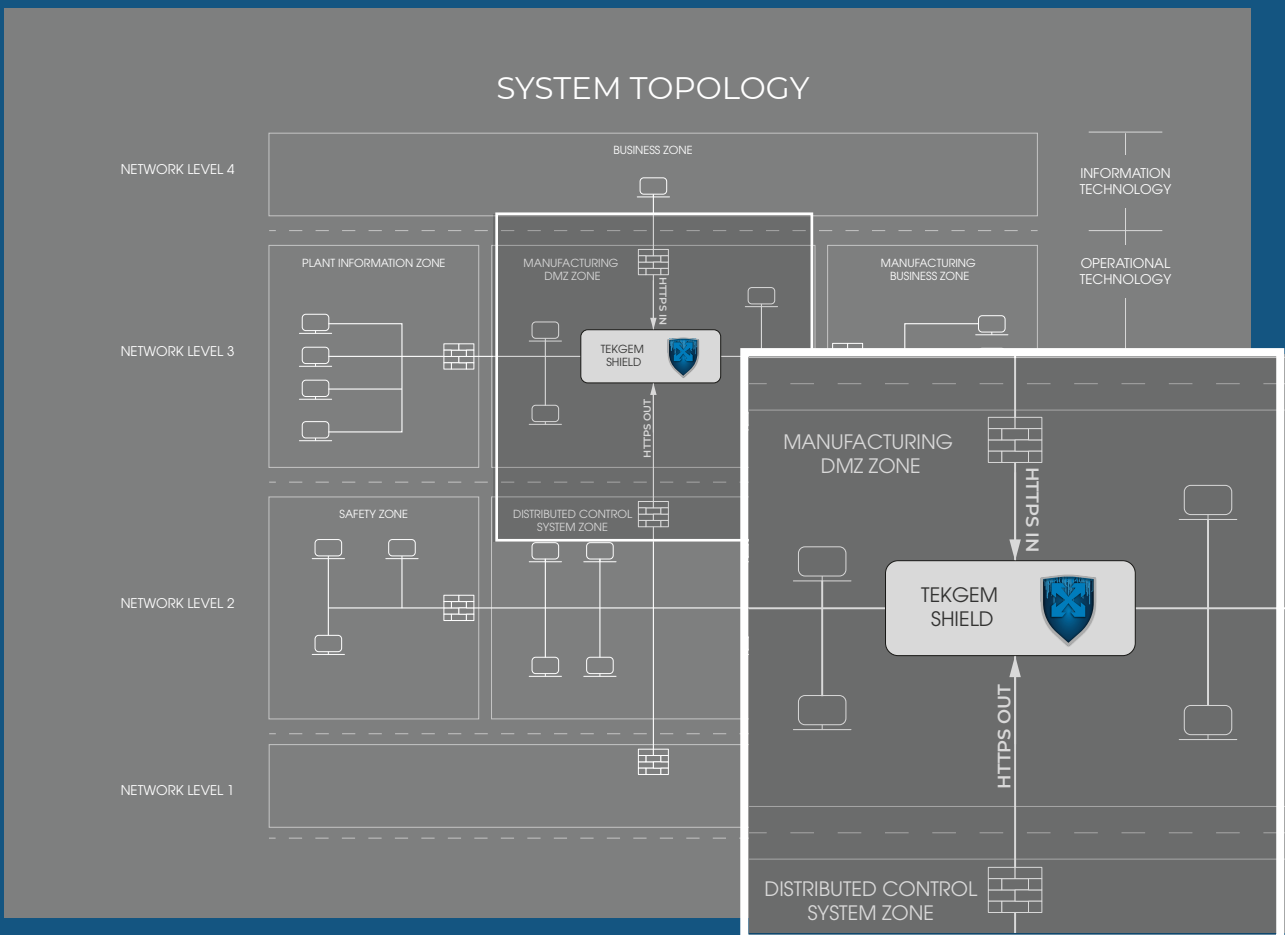
[*Gartner names Microsoft a Leader in the 2021 Endpoint Protection Platforms Magic Quadrant - Microsoft Security Blog](#)

To receive the best possible protection, Shield requires securely encrypted HTTPS access to Microsoft Windows Update in order to provide real-time updates against the latest threats.

AVOIDING THE FIREWALL SWISS CHEESE:

- A Single outbound HTTPS firewall rule from control networks to the Shield kiosk.
- A Single inbound HTTPS firewall rule from corporate networks to the Shield kiosk.

We recommend that Shield is connected to your Manufacturing DMZ (Purdue Level 3). Following the principals outlined above ensures Shield does not act as a conduit between your Level 4 and Level 2 networks.



REMOVABLE MEDIA SECURITY

Shield offers a simple interface, no login is required before a device is scanned. Anyone within your organisation or a visiting company maintaining systems or presenting solutions can have their removable media device scanned prior to using it within your network without the need for additional administration.

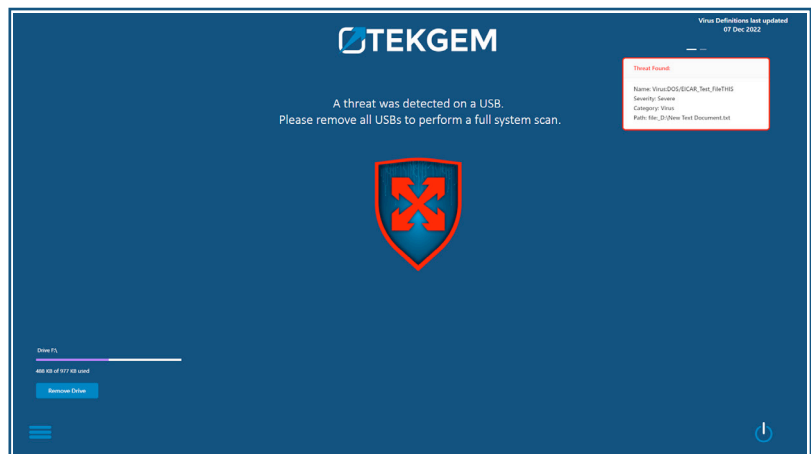
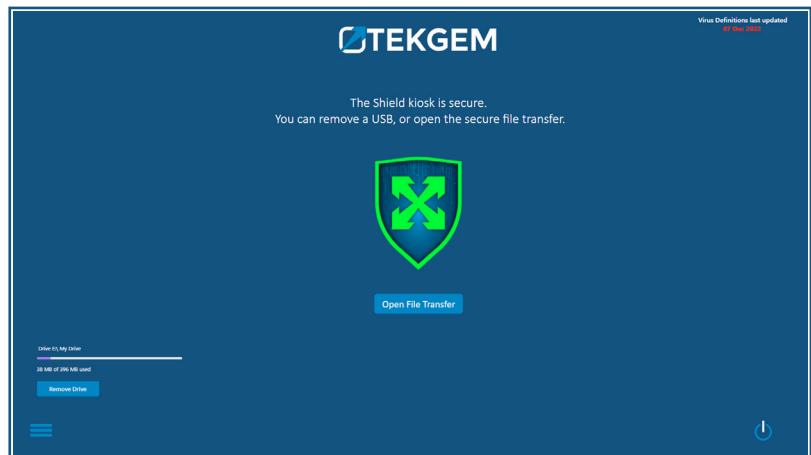
Designed to prevent any accidental or deliberate attempt to use a removable media device to transfer infected files and execute malicious code, Shield will automatically detect if a device is connected to the kiosk and immediately disable its own network adapter, effectively isolating the kiosk in a secure sandboxed environment. A full scan of the device is then automatically carried out to detect any malware or viruses that could be present.

When Shield determines there is no threat, the network adapter is automatically re-enabled to allow files to be securely transferred in and out of your network.

In the background Shield will continually monitor for any other removable media device being inserted and again disable the network adapter before carrying out a scan of the device.

If a threat is detected, Shield will attempt to remove the threat and alert you. A request to remove the device will be displayed and the network adapter will remain disabled. Once removed a full system scan is automatically started cleaning the Shield kiosk, allowing any malware that may have been transferred to be removed if possible.

If a threat still exists after cleaning the network adapter will remain disabled until the malware or virus is removed by Windows Defender and by following local incident response procedures.



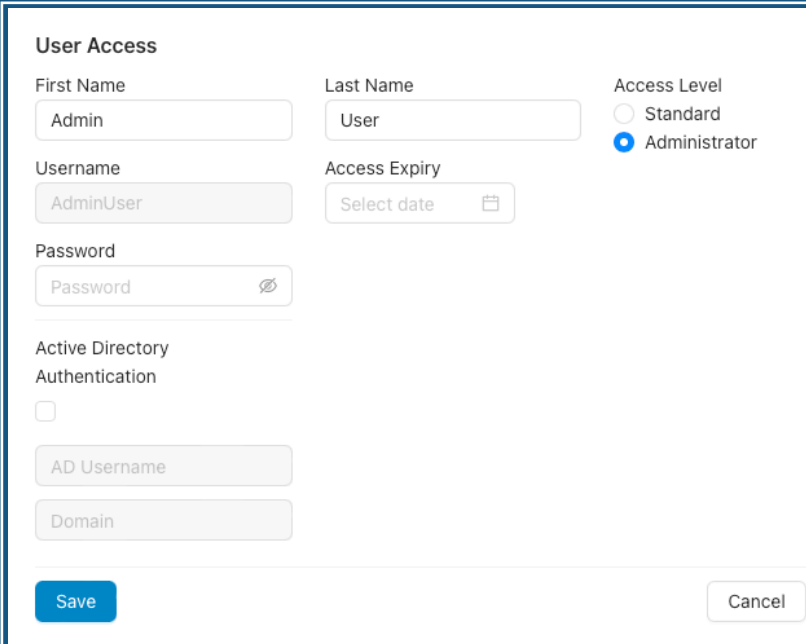
SHIELD TRANSFER

Another potential issue for organisations is sensitive or safety critical information moving into or out of your network boundary without any controls in place or the knowledge and approval of appropriate management. This information could be in the form of commercially sensitive data or configuration information for the safe start-up or safe shut-down of plant equipment.

To help mitigate this risk this Tekgem have created a secure file transfer application called Shield Transfer. This can be integrated into the Shield kiosk or run as a standalone program.

Shield Transfer is a web based application that runs on a Windows virtual machine within your environment, which means it can be managed using your existing technologies for patching, backup & recovery and malware protection.

The application uses account based security with either local or Active Directory integration to ensure only authorised people can access your network and file transfer location, keeping you in control.



User Access

First Name: Admin

Last Name: User

Access Level: Standard Administrator

Username: AdminUser

Access Expiry: Select date

Password: Password

Active Directory Authentication:

AD Username: AD Username

Domain: Domain

Save Cancel

Multi factor authentication (MFA) is also integrated into Shield Transfer giving you the option to enhance the security level of the application by introducing an additional security step in the verification and login process.

Shield Transfer then allows users to securely move data across different network levels via the user interface.

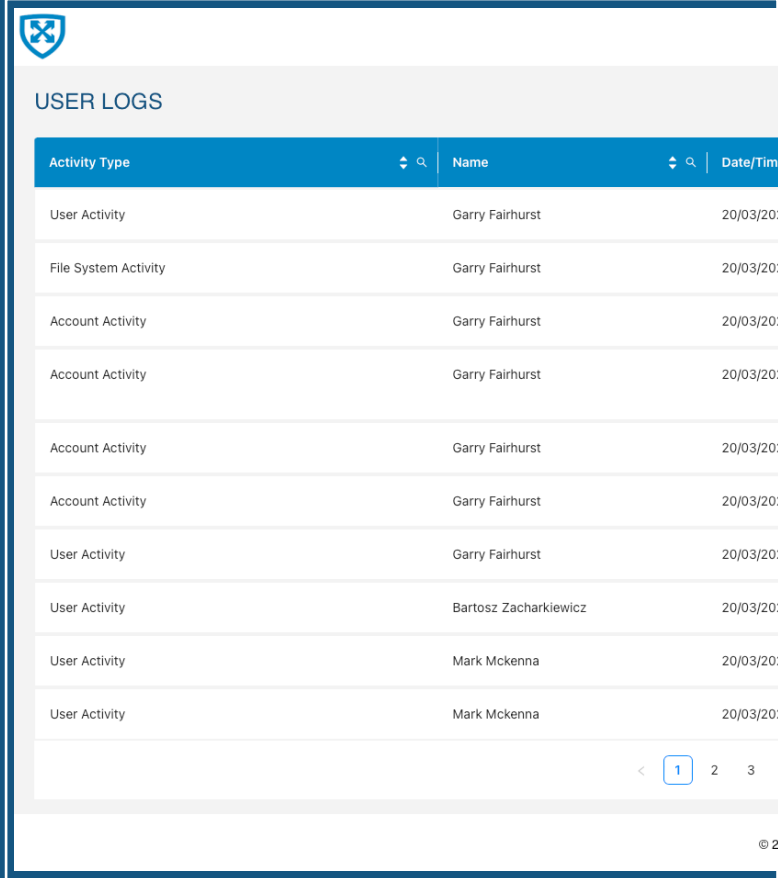
When integrated with the Shield kiosk it creates a complete solution for removable media and file transfers across an organisation.

SHIELD TRANSFER

All actions carried out within Shield Transfer are monitored and logged. This includes logins, transfers, uploads, downloads and user management ensuring that at all times you have full visibility of the people using the system and the files and folders they are moving around.

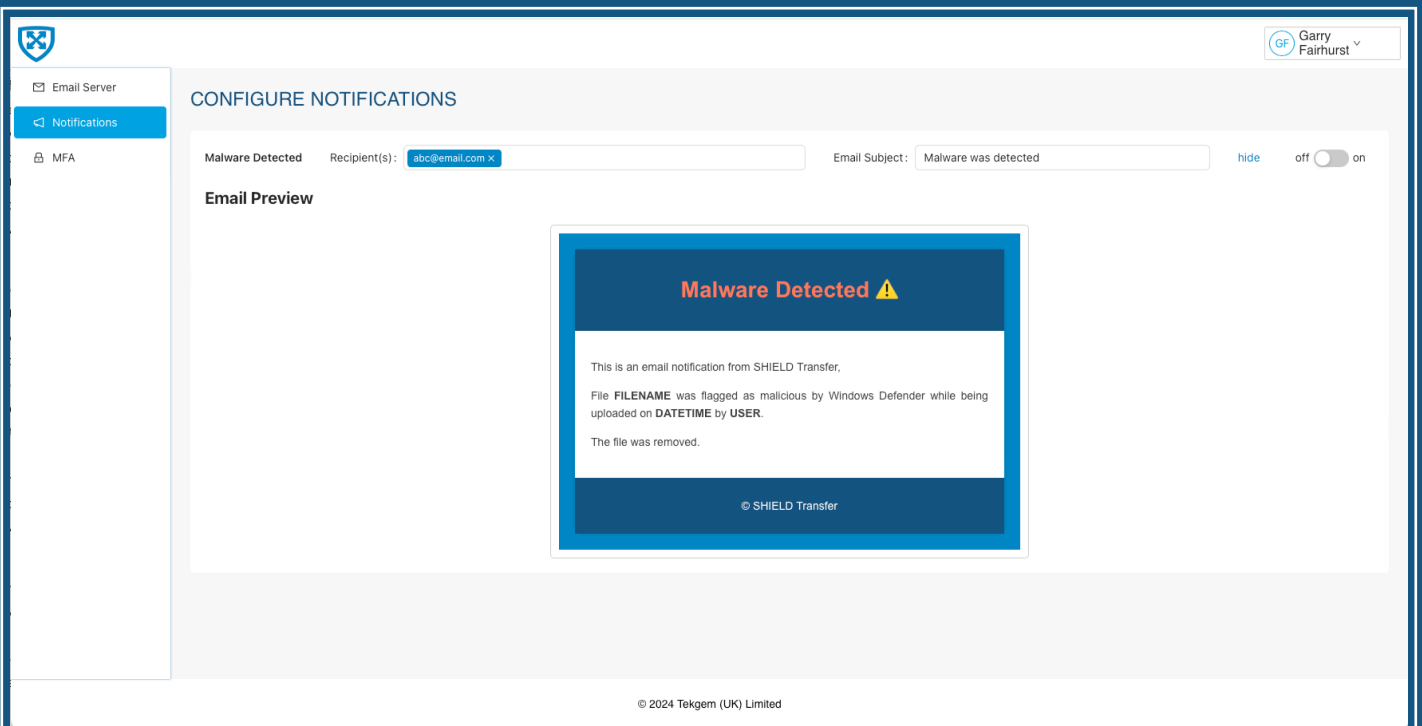
Any time a file or folder is transferred it is automatically scanned in real-time with the built in anti virus engine. If a malicious file is detected at this point it is automatically blocked by the software preventing any spread and a notification is generated and emailed to selected users.

Any discovered threats should invoke your local incident response procedure for malware detection.



The screenshot shows the 'USER LOGS' section of the application. It features a table with three columns: 'Activity Type', 'Name', and 'Date/Time'. The table contains several rows of log entries. At the bottom right, there is a pagination control showing '1', '2', and '3', with '1' being the active page.

Activity Type	Name	Date/Time
User Activity	Garry Fairhurst	20/03/2024
File System Activity	Garry Fairhurst	20/03/2024
Account Activity	Garry Fairhurst	20/03/2024
Account Activity	Garry Fairhurst	20/03/2024
Account Activity	Garry Fairhurst	20/03/2024
Account Activity	Garry Fairhurst	20/03/2024
User Activity	Garry Fairhurst	20/03/2024
User Activity	Bartosz Zacharkiewicz	20/03/2024
User Activity	Mark Mckenna	20/03/2024
User Activity	Mark Mckenna	20/03/2024



The screenshot shows the 'CONFIGURE NOTIFICATIONS' interface. It includes a sidebar with 'Email Server', 'Notifications', and 'MFA'. The main area is titled 'CONFIGURE NOTIFICATIONS' and contains a form for setting up notifications. The 'Malware Detected' notification is configured with the recipient 'abc@email.com' and the subject 'Malware was detected'. A toggle switch for 'hide' is currently turned off. Below the form is an 'Email Preview' section showing a sample email notification. The preview email has a blue header with 'Malware Detected' and a warning icon. The body text reads: 'This is an email notification from SHIELD Transfer. File FILENAME was flagged as malicious by Windows Defender while being uploaded on DATETIME by USER. The file was removed.' The footer of the preview email says '© SHIELD Transfer'.

CONFIGURE NOTIFICATIONS

Malware Detected Recipient(s): abc@email.com x Email Subject: Malware was detected hide off on

Email Preview

Malware Detected ⚠

This is an email notification from SHIELD Transfer.

File FILENAME was flagged as malicious by Windows Defender while being uploaded on DATETIME by USER.

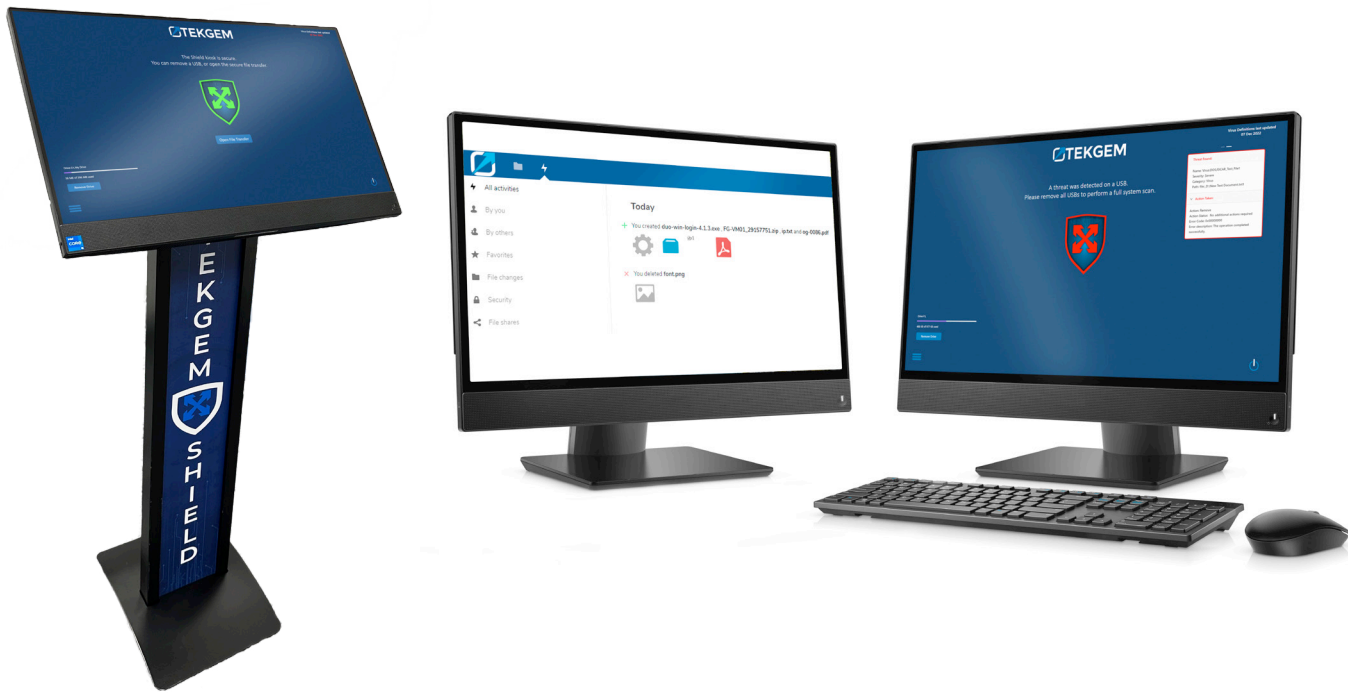
The file was removed.

© SHIELD Transfer

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HARDWARE OPTIONS

The **SHIELD** kiosk is an all-in-one appliance that delivers enhanced security in a space-saving design. It is available in three different configurations:



KIOSK

- Touch screen
- 13th Generation Intel® Core i5
- 16GB ram
- 256GB SSD
- WiFi 6E (802.11ax)
- RJ-45 10/100/1000 Mbps
- USB 3.2 Type-A & Type-C
- USB 3.2 Type-A with PowerShare
- SD 4.0 card slot

TOUCHSCREEN

- Touch screen
- 13th Generation Intel® Core i5
- 16GB ram
- 256GB SSD
- WiFi 6E (802.11ax)
- RJ-45 10/100/1000 Mbps
- USB 3.2 Type-A & Type-C
- USB 3.2 Type-A with PowerShare
- SD 4.0 card slot

DESKTOP

- Non-touch
- 13th Generation Intel® Core i5
- 8GB ram
- 256GB SSD
- WiFi 6E (802.11ax)
- RJ-45 10/100/1000 Mbps
- USB 3.2 Type-A & Type-C
- USB 3.2 Type-A with PowerShare
- SD 4.0 card slot
- Keyboard & Mouse

INSTALLED SOFTWARE

The SHIELD kiosk is a fully locked down appliance shipped with Tekgem's Shield Gateway software that includes built in seamless integration with Shield Transfer.

Shield natively uses Windows Defender for scanning devices and files. Shield also supports Symantec Endpoint Protection and Trellix. The Shield kiosk can be easily updated to use different solutions by default.

Shield kiosk software:

- Shield Gateway Application
- Windows Defender
- Windows 11 Pro or Ent IoT 64bit

Shield Transfer software:

- Shield Transfer
- Windows Defender
- Windows Server 2022 virtual machine

Implementation services included:

- Pre-deployment setup

The kiosk will be configured by our expert team at Tekgem to ensure when you receive it, its ready to go.
- Kiosk deployment

We will deliver the kiosk to your chosen location, connect it up and apply power.
- Network configuration

We will configure the kiosk to ensure it is connected to your network and working as intended.
- Remote installation

If you prefer we can ship the Shield kiosk to you so you can deploy it yourself and we can remotely complete any final required configuration.

REQUEST A DEMO

enquiries@tekgem.co.uk



SHIELD

www.tekgem.co.uk



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NEPIC SMALL BUSINESS OF THE YEAR WINNER 2020



TEKGEM
BRIDGING THE GAP BETWEEN IT & OT